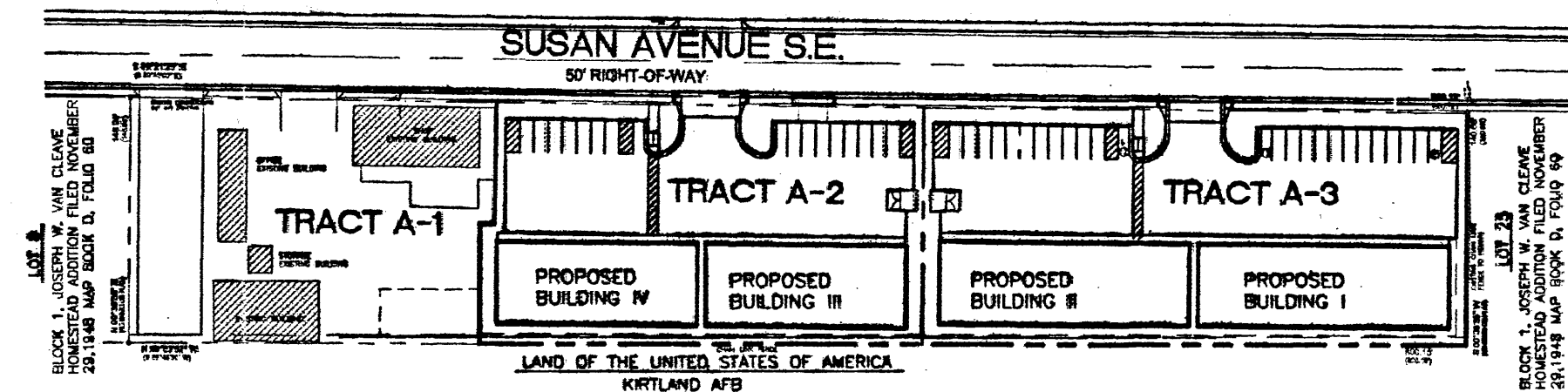
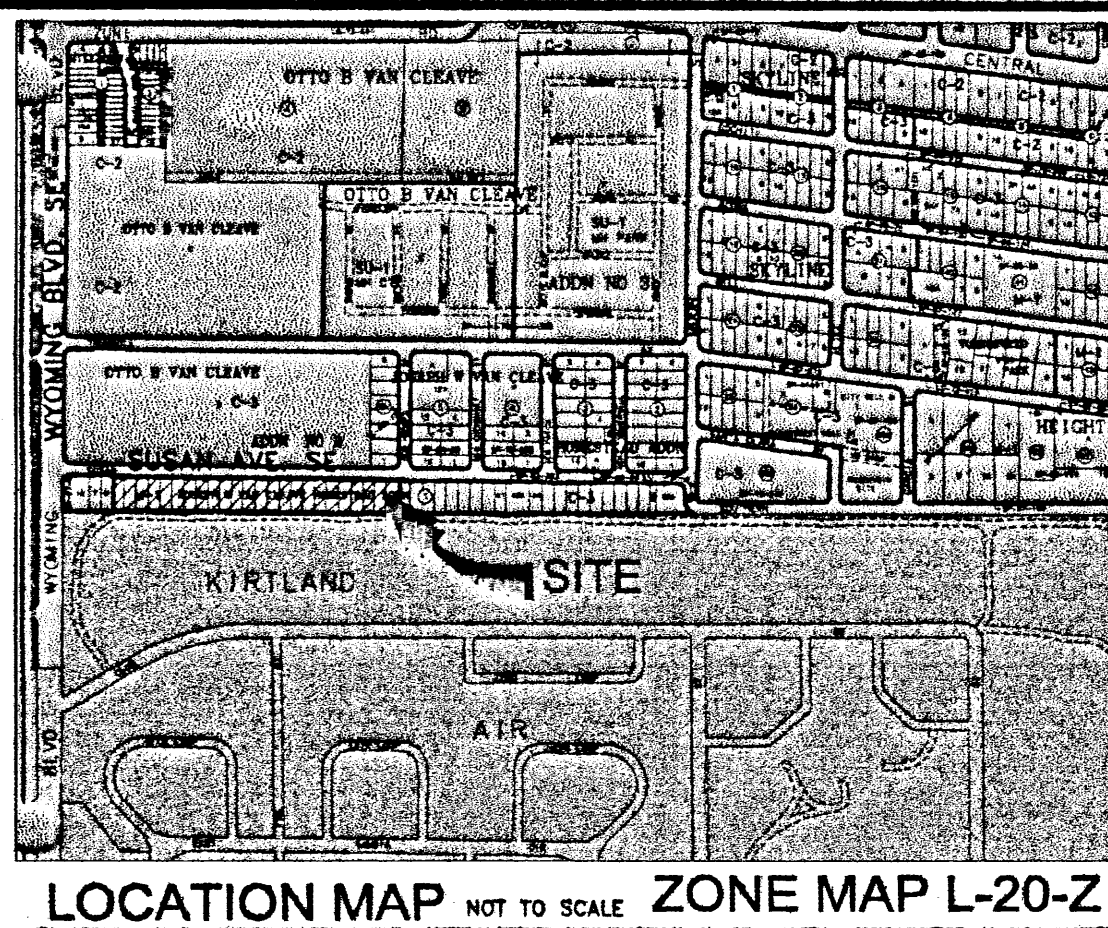




SITE LAYOUT DIAGRAM - TRACTS A-1, A-2 AND A-3.

1"=100'-0"

LEGEND

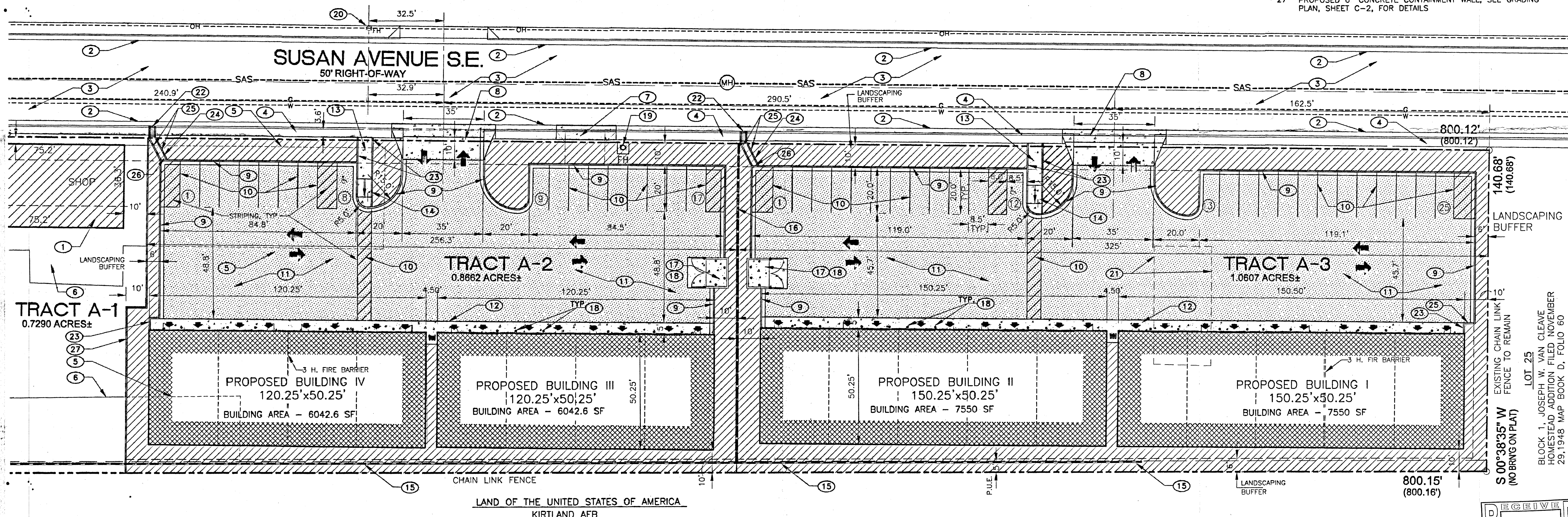
- NEW CONCRETE PAVEMENT
- LANDSCAPING AREA
- NEW ASPHALT PAVEMENT
- VEHICULAR TRAFFIC DIRECTION
- ENTRY DOOR
- PROPOSED BIKE RACK LOCATION
- EXISTING WATER LINE TO REMAIN
- EXISTING SEWER LINE TO REMAIN
- EXISTING SEWER MANHOLE
- EXISTING GAS LINE TO REMAIN
- EXISTING OVERHEAD POWER LINE TO REMAIN

OFF-STREET PARKINGS

	TRACT A-2	TRACT A-3
PROPOSED BUILDINGS:	TWO MANUFACTURING 6,042 SF BUILDINGS = 12,084 SF	TWO MANUFACTURING 7,550 SF BUILDINGS = 15,100 SF
PARKING REQUIREMENT: 1 P.S. PER 1000 SF OF NET LEASE AREA NUMBER OF SPACES PROVIDED: NUMBER OF HC SPACES REQUIRED: 1 SPACE/1-25 REQUIRED P.S. NUMBER OF HC SPACES PROVIDED: NUMBER OF BIKE SPACES REQUIRED: NUMBER OF BIKE SPACES REQUIRED:	13 PARKING SPACES 17 PARKING SPACES 1, VAN ACCESSIBLE, P.S. 1, VAN ACCESSIBLE, P.S. 2 P.S. 3 P.S.	16 PARKING SPACES 25 PARKING SPACES 1, VAN ACCESSIBLE, P.S. 1, VAN ACCESSIBLE, P.S. 2 P.S. 3 P.S.
STANDARD SPACE DIMENSIONS: HC ACCESSIBLE SPACE DIMENSIONS:	8.5' x 20' 8.5' x 20' with 8' x 20' delineated aisle.	

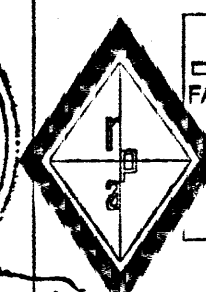
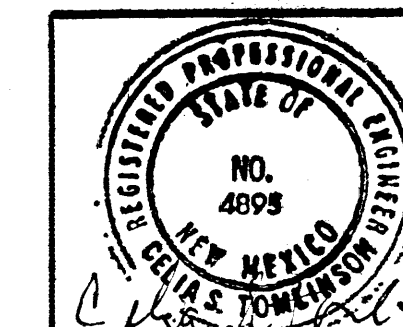
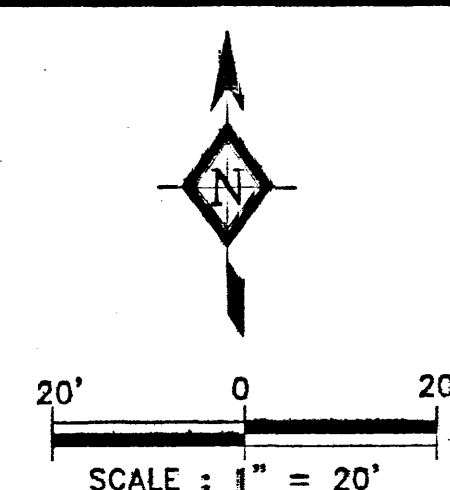
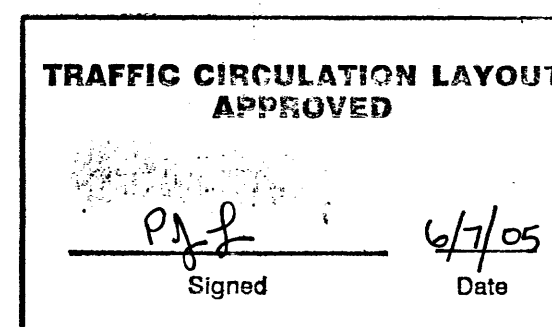
KEYED NOTES

- EXISTING BUILDING TO REMAIN
- EXISTING CONCRETE CURB & GUTTER TO REMAIN
- EXISTING ASPHALT PAVEMENT TO REMAIN
- EXISTING 3.6' WIDE CONCRETE SIDEWALK TO REMAIN
- PORTION OF EXISTING CONCRETE SLAB TO BE REMOVED
- PORTION OF EXISTING CONCRETE SLAB TO REMAIN
- EXISTING DRIVEPAD TO BE REMOVED. CONSTRUCT STANDARD CONCRETE CURB & GUTTER AND SIDEWALK PER COA STD DWGS #2415A AND 2430. ASSURE SMOOTH TRANSITION WITH EXISTING WORK. PATCH EXISTING ASPHALT PAVEMENT TO EXTENT REQUIRED PER COA STD DWG #2465.
- PROPOSED CONCRETE DRIVEPAD PER COA STD DWG #2425. MATCH EXISTING CONCRETE AND ASPHALT ELEVATIONS WHERE REQUIRED. ASSURE SMOOTH TRANSITION. PATCH EXISTING ASPHALT PAVEMENT AS REQUIRED PER COA STD DWG #2465.
- PROPOSED CONCRETE MEDIAN CURB PER COA STD DWG #2415B. STRIPING ON ASPHALT PAVEMENT, TYPICAL
- PROPOSED ASPHALT PAVEMENT PER COA STD DWG #2405A
- PROPOSED 5' CONCRETE SIDEWALK PER COA STD DWG #2430; TOP OF CONCRETE @ OUTER EDGE EVEN WITH TOP OF ASPHALT
- PROPOSED 6' CONCRETE SIDEWALK PER COA STD DWG #2430
- CONCRETE UNIDIRECTIONAL HC RAMP PER COA STD DWG #2426
- EXISTING CMU BLOCK WALL TO REMAIN
- PROPOSED NEW CMU BLOCK RETAINING WALL, SEE GRADING PLAN
- PROPOSED TRASH BIN ENCLOSURE
- 6" O.D. STEEL PIPE, CONCRETE FILLED BOLLARDS, ENCASED IN 12" CONCRETE ALL AROUND AND EMBEDDED 2'-0". TYPICAL ALL OVERHEAD DOORS AND TRASH BIN ENCLOSURE
- PROPOSED FIRE HYDRANT
- EXISTING FIRE HYDRANT TO REMAIN
- EXISTING SHED TO BE DEMOLISHED
- PROPOSED 18" WIDE CONCRETE SIDEWALK GUTTER W/GRATE, (SEE GRADING PLAN), PER COA STD DWG #2236
- PROPOSED CONCRETE HEADER CURB PER COA STD DWG #2415B.
- PROPOSED 18" WIDE CONCRETE DRAINAGE GUTTER, SEE GRADING PLAN (SHEET C-2) FOR DETAILS
- PROPOSED 4' WIDE RUNDOWN CURB, SIM. TO COA STD DWG #241
- PROPOSED 2' WIDE RUNDOWN CURB, SIM. TO COA STD DWG #241
- PROPOSED 6" CONCRETE CONTAINMENT WALL, SEE GRADING PLAN, SHEET C-2, FOR DETAILS



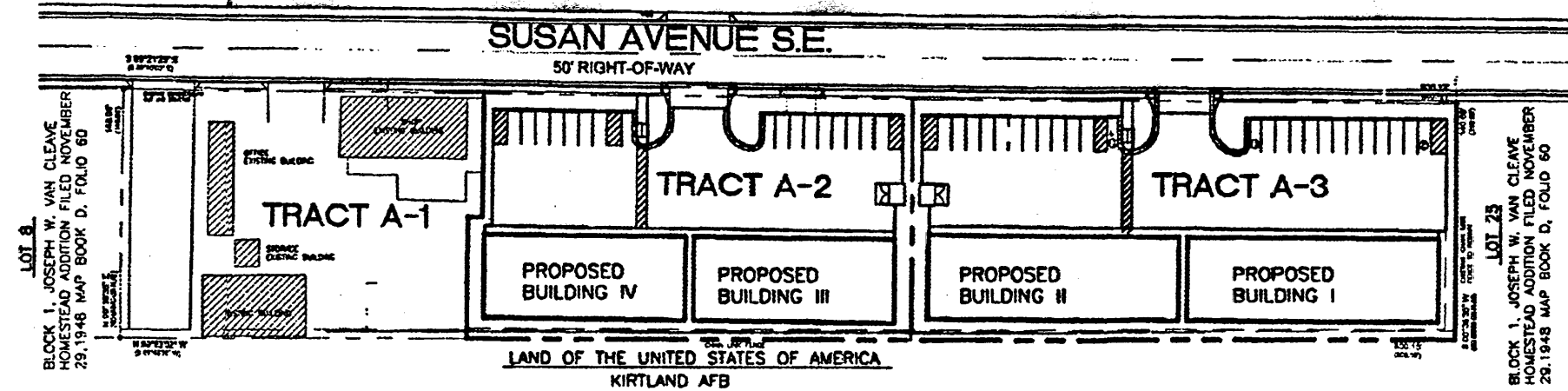
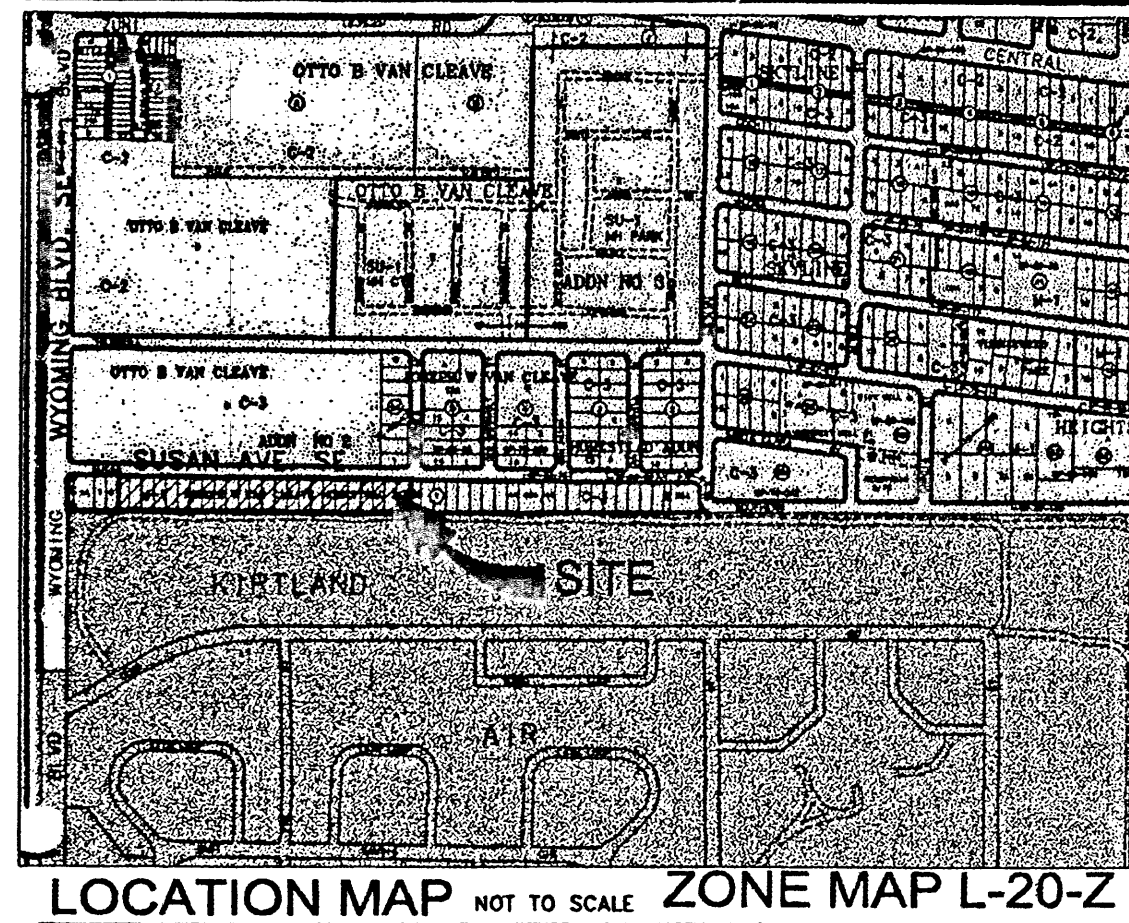
SITE PLAN - TRACTS A-2 AND A-3

1"=20'-0"



RHOMBUS P.A., INC.
FACILITIES ENGINEERS/ENVIRONMENTAL CONSULTANTS
e-mail: rhombus@nmle.com
web site: www.RHOMBUSPA.COM
2620 San Mateo NE Suite B Albuquerque, NM 87110
TEL (505) 881-8890 FAX (505) 881-8896

PROJECT TITLE:	MANUFACTURING/WAREHOUSING BUILDINGS		
	8800 SUSAN SE		
SHEET TITLE:	SITE PLAN TRAFFIC CIRCULATION LAYOUT		
MAP NO:	L-20-Z	RHOMBUS JOB NO:	05-C2-2
		SHEET	C-1
		1 OF 1	



SITE LAYOUT DIAGRAM - TRACTS A-1, A-2 AND A-3.

LEGEND

- NEW CONCRETE PAVEMENT
- LANDSCAPING AREA
- NEW ASPHALT PAVEMENT
- VEHICULAR TRAFFIC DIRECTION
- ENTRY DOOR
- PROPOSED BIKE RACK LOCATION
- EXISTING WATER LINE TO REMAIN
- EXISTING SEWER LINE TO REMAIN
- EXISTING SEWER MANHOLE
- EXISTING GAS LINE TO REMAIN
- EXISTING OVERHEAD POWER LINE TO REMAIN

	TRACT A-2	TRACT A-3
PROPOSED BUILDINGS:	TWO MANUFACTURING 6,042 SF BUILDINGS = 12,084 SF	TWO MANUFACTURING 7,550 SF BUILDINGS = 15,100 SF
PARKING REQUIREMENT:		
1 P.S. PER 1000 SF OF NET LEASE AREA	13 PARKING SPACES	16 PARKING SPACES
NUMBER OF SPACES PROVIDED:	17 PARKING SPACES	25 PARKING SPACES
NUMBER OF HC SPACES REQUIRED:	1, VAN ACCESSIBLE, P.S.	2 P.S.
1 SPACE/1-25 REQUIRED P.S.		3, P.S. ACCESSIBLE, P.S.
NUMBER OF HC SPACES PROVIDED:	1, VAN ACCESSIBLE, P.S.	2 P.S.
NUMBER OF BIKE SPACES REQUIRED:	2 P.S.	3, P.S. ACCESSIBLE, P.S.
NUMBER OF BIKE SPACES PROVIDED:	3 P.S.	
STANDARD SPACE DIMENSIONS:	8.5' x 20'	
HC ACCESSIBLE SPACE DIMENSIONS:	8.5' x 20' with 8' x 20' delineated aisle.	

6" O.D. CONCRETE FILLED STEEL
PIPE, ENCASED IN 12"
CONCRETE ALL AROUND AND
EMBEDDED 24".

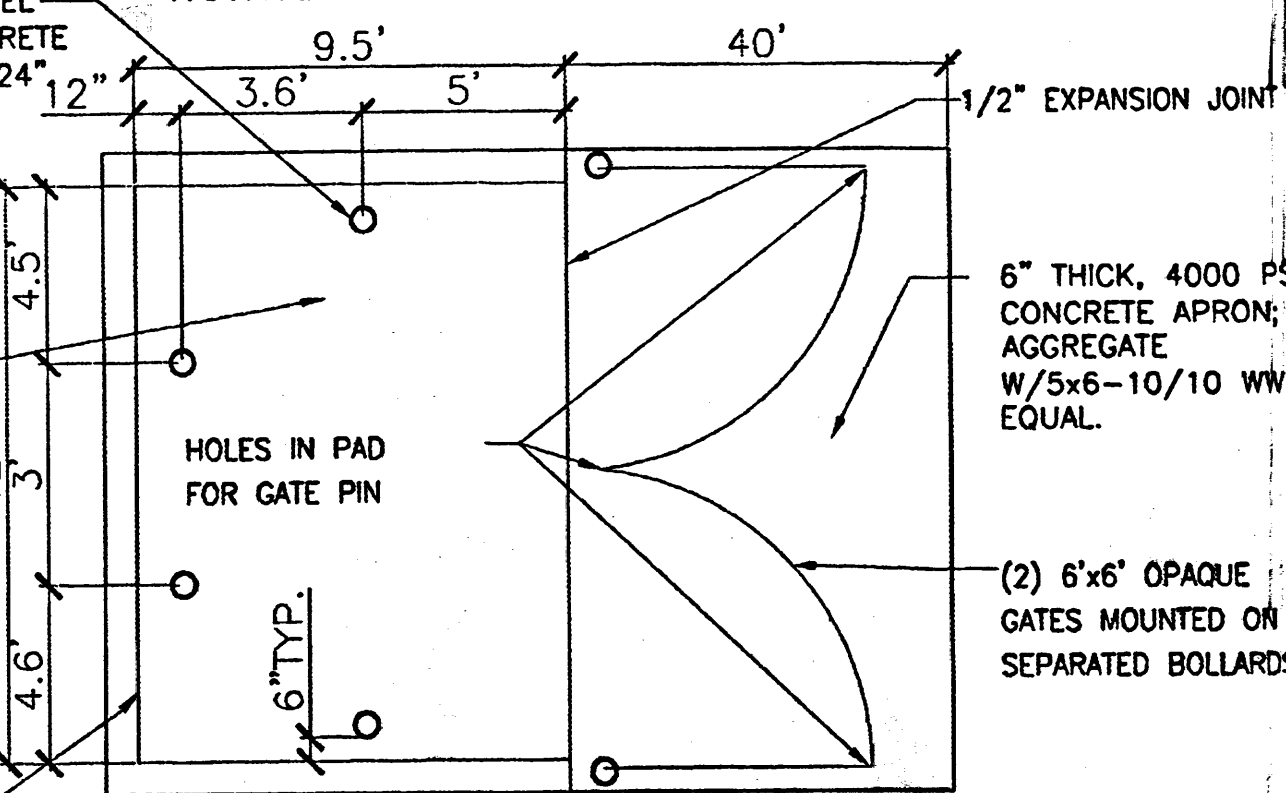
(2) 6"x6" OPAQUE (METAL
SIDING PANELS ON WELDED
ANGLE FRAME) GATES
MOUNTED ON SEPARATED
BOLLARDS

6" O.D. CONCRETE FILLED STEEL
PIPE, ENCASED IN 12"
CONCRETE ALL AROUND AND
EMBEDDED 24".

6" THICK, 4000 PSI
CONCRETE SLAB; 3/4"
AGGREGATE
W/5x6-10/10 WWM
OR EQUAL. 1/8:12
SLOPE TO DRAIN.

6' HIGH OPAQUE
WALLS (CMU OR
METAL SIDING TO
MATCH BUILDING, ON
STEEL FRAME)

TRASH BIN ENCLOSURE FRONT ELEVATION

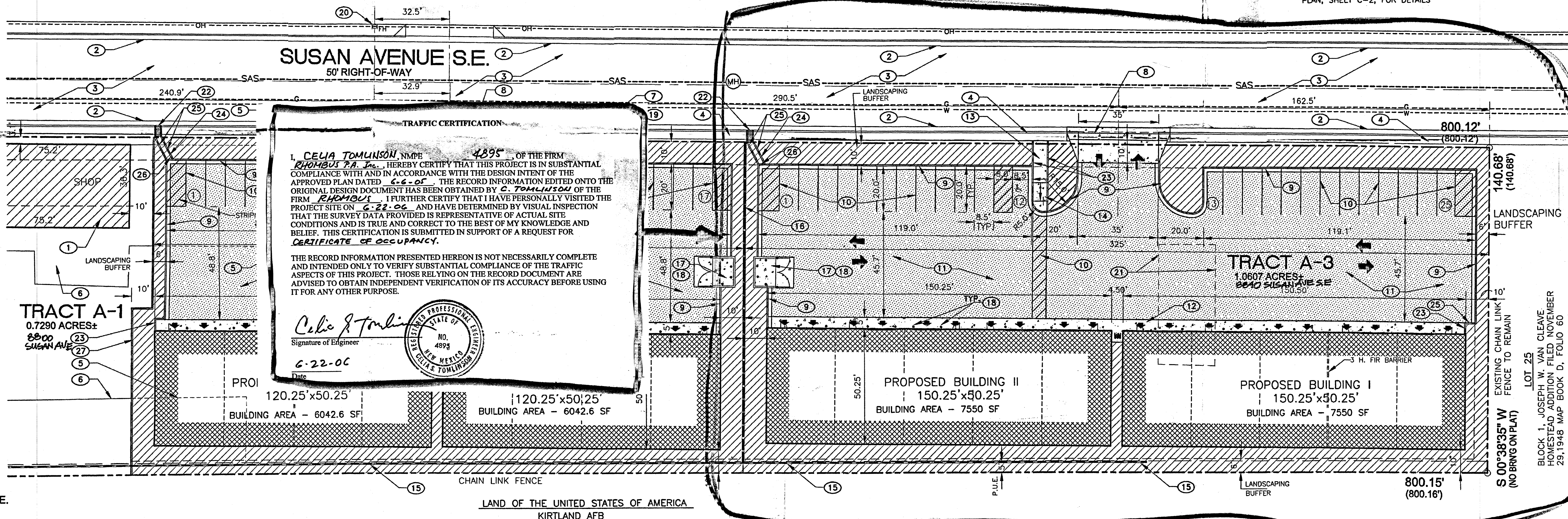


TRASH BIN ENCLOSURE DETAIL

NOT TO SCALE

KEYED NOTES

- EXISTING BUILDING TO REMAIN
- EXISTING CONCRETE CURB & GUTTER TO REMAIN
- EXISTING ASPHALT PAVEMENT TO REMAIN
- EXISTING 3.6' WIDE CONCRETE SIDEWALK TO REMAIN
- PORTION OF EXISTING CONCRETE SLAB TO BE REMOVED
- PORTION OF EXISTING CONCRETE SLAB TO REMAIN
- EXISTING DRIVEPAD TO BE REMOVED. CONSTRUCT STANDARD CONCRETE CURB & GUTTER AND SIDEWALK PER COA STD DWCS #2415A AND 2430. ASSURE SMOOTH TRANSITION WITH EXISTING WORK. PATCH EXISTING ASPHALT PAVEMENT TO EXTENT REQUIRED PER COA STD DWG #2465.
- PROPOSED CONCRETE DRIVEPAD PER COA STD DWG #2425. MATCH EXISTING CONCRETE AND ASPHALT ELEVATIONS WHERE REQUIRED. ASSURE SMOOTH TRANSITION. PATCH EXISTING ASPHALT PAVEMENT AS REQUIRED PER COA STD DWG #2465
- PROPOSED CONCRETE MEDIAN CURB PER COA STD DWG #2415B. STRIPING ON ASPHALT PAVEMENT, TYPICAL
- PROPOSED ASPHALT PAVEMENT PER COA STD DWG #2405A
- PROPOSED 5' CONCRETE SIDEWALK PER COA STD DWG #2430; TOP OF CONCRETE @ OUTER EDGE EVEN WITH TOP OF ASPHALT
- PROPOSED 6' CONCRETE SIDEWALK PER COA STD DWG #2430
- CONCRETE UNIDIRECTIONAL HC RAMP PER COA STD DWG #2426
- EXISTING CMU BLOCK WALL TO REMAIN
- PROPOSED NEW CMU BLOCK RETAINING WALL. SEE GRADING PLAN
- PROPOSED TRASH BIN ENCLOSURE
- 6" O.D. STEEL PIPE, CONCRETE FILLED BOLLARDS, ENCASED IN 12" CONCRETE ALL AROUND AND EMBEDDED 2'-0", TYPICAL ALL OVERHEAD DOORS AND TRASH BIN ENCLOSURE
- PROPOSED FIRE HYDRANT
- EXISTING FIRE HYDRANT TO REMAIN
- EXISTING SHED TO BE DEMOLISHED
- PROPOSED 18" WIDE CONCRETE SIDEWALK GUTTER W/GRATE, (SEE GRADING PLAN), PER COA STD DWG #2236
- PROPOSED CONCRETE HEADER CURB PER COA STD DWG #2415B.
- PROPOSED 18" WIDE CONCRETE DRAINAGE GUTTER, SEE GRADING PLAN (SHEET C-2) FOR DETAILS
- PROPOSED 4' WIDE RUNDOWN CURB, SIM. TO COA STD DWG #241
- PROPOSED 2' WIDE RUNDOWN CURB, SIM. TO COA STD DWG #241
- PROPOSED 6" CONCRETE CONTAINMENT WALL, SEE GRADING PLAN, SHEET C-2, FOR DETAILS

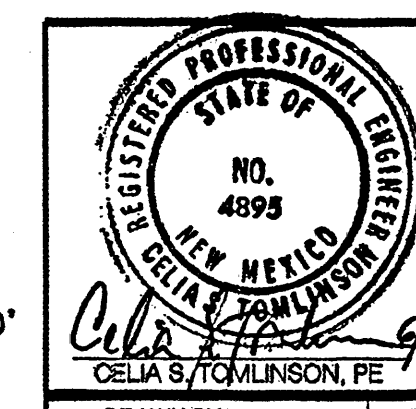
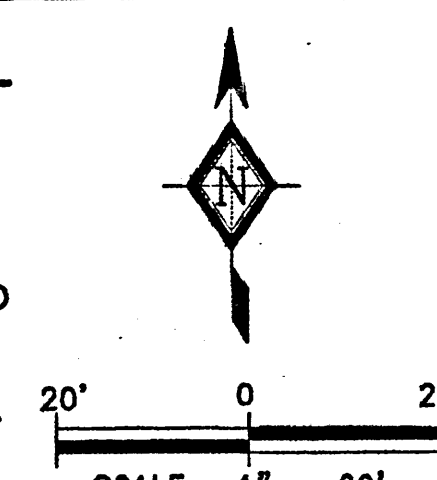


SITE PLAN - TRACTS A-2 AND A-3

NOTICE TO CONTRACTOR

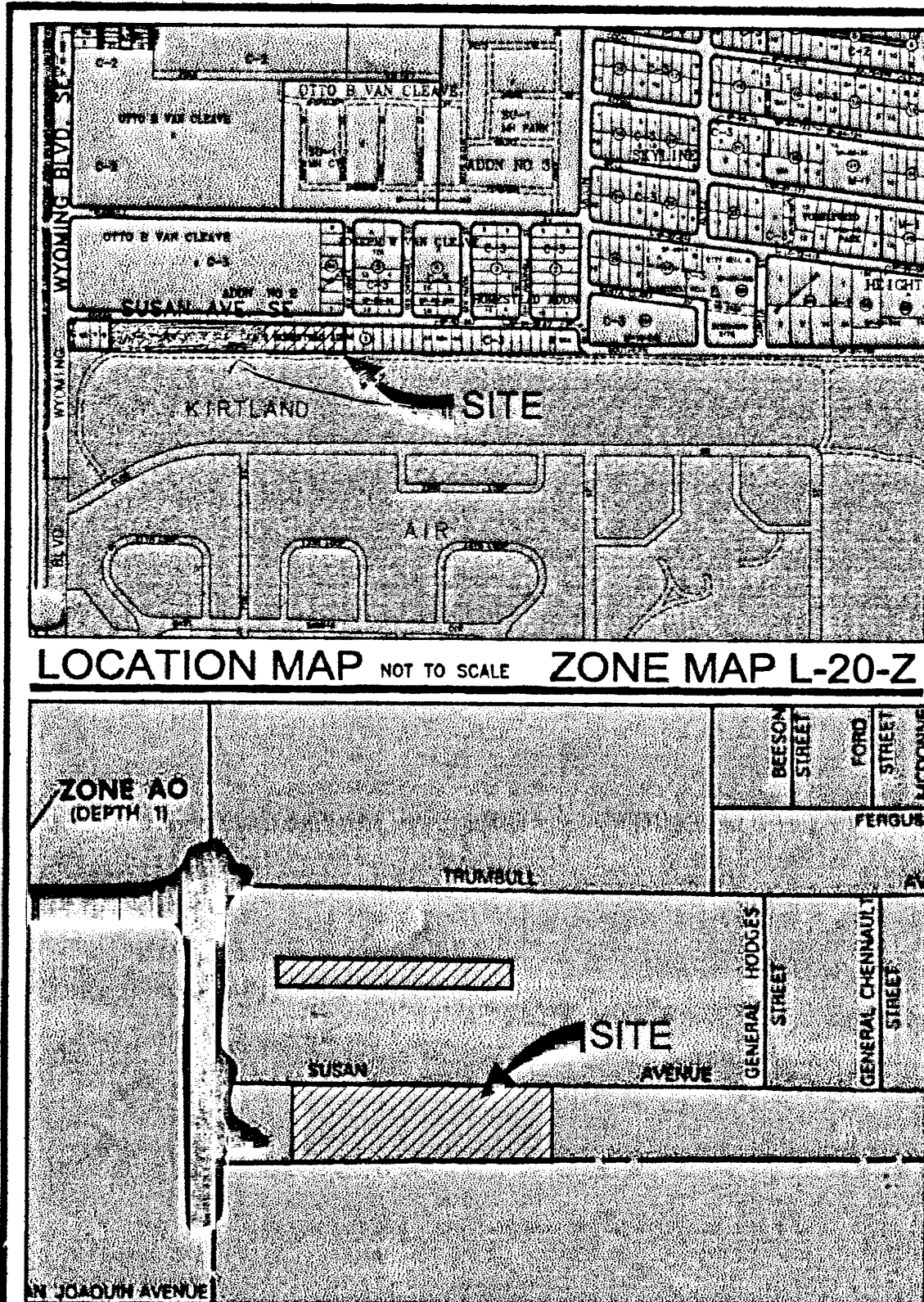
- AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN STREET RIGHT-OF-WAY. AN APPROVED COPY OF THIS PLAN MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
- ALL WORK DETAILED ON THIS PLAN TO BE PERFORMED, EXCEPT AS OTHERWISE PROVIDED HEREON, IN ACCORDANCE WITH CITY OF ALBUQUERQUE INTERIM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION AS AMENDED WITH UPDATE NO.7 AND IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS RULES AND REGULATIONS.
- TWO WORKING DAYS PRIOR TO ANY EXCAVATION CONTRACTOR MUST CONTACT LINE LOCATING SERVICE (260-1009) FOR LOCATION OF EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH MINIMUM DELAY.

- BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE.
- MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
- WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.
- UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON MAPS AND/OR EVIDENCES ON THE GROUND. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATIONS OF ALL UTILITIES, SHOWN OR NOT SHOWN ON THE DRAWING PRIOR TO COMMENCING THE WORK.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
- CONTRACTOR IS RESPONSIBLE FOR KEEPING RUNOFF ON SITE DURING CONSTRUCTION AND CLEANING UP SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY AND ADJOINING PROPERTIES AFTER CONSTRUCTION.

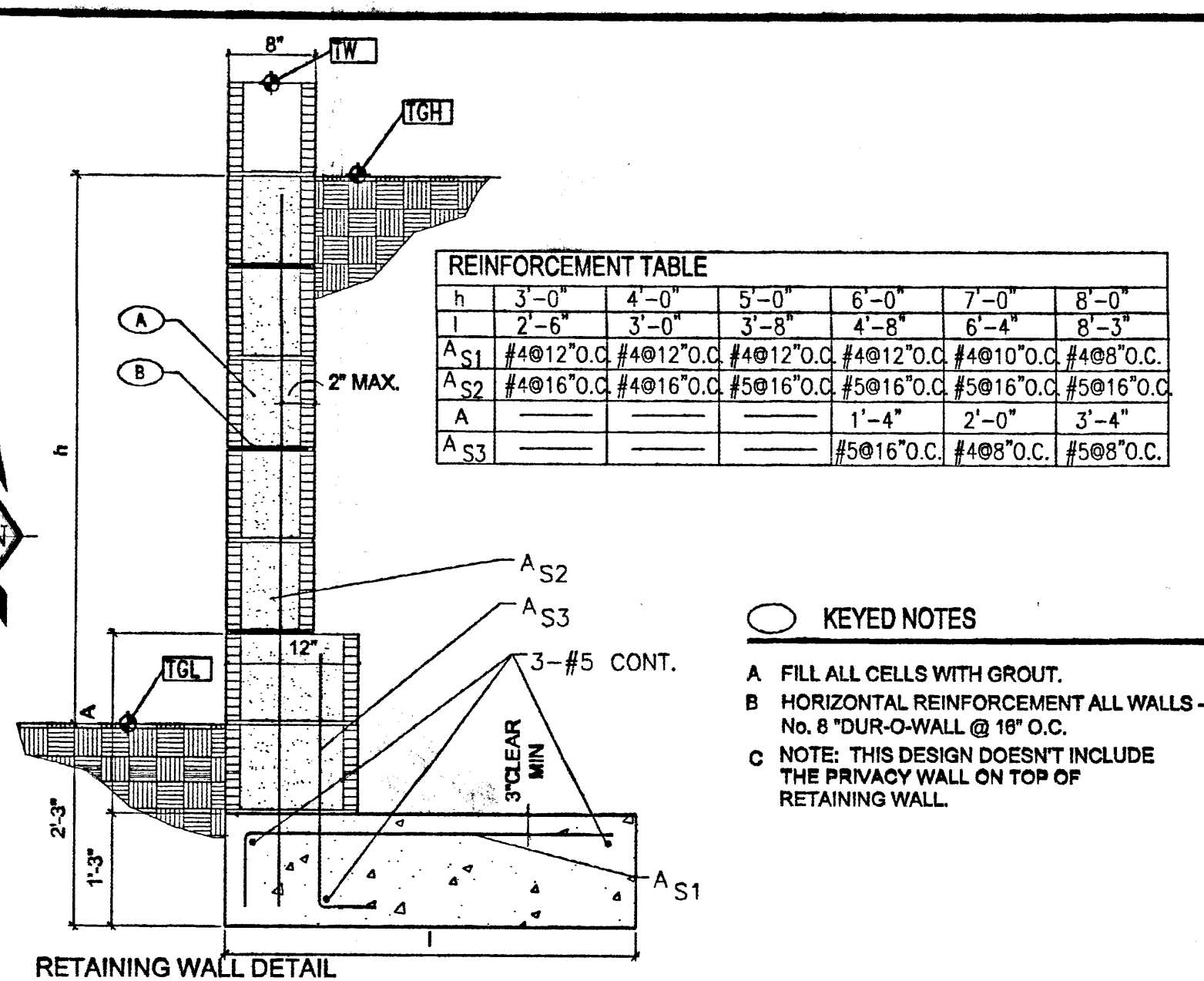


RHOMBUS P.A., INC.
FACILITIES ENGINEERS/ENVIRONMENTAL CONSULTANTS
e-mail: rhombus@nmsa.com
web site: www.RHOMBUSPA.COM
2820 San Mateo NE Suite B
Albuquerque, NM 87110
TEL (505) 861-6690 FAX (505) 861-6696

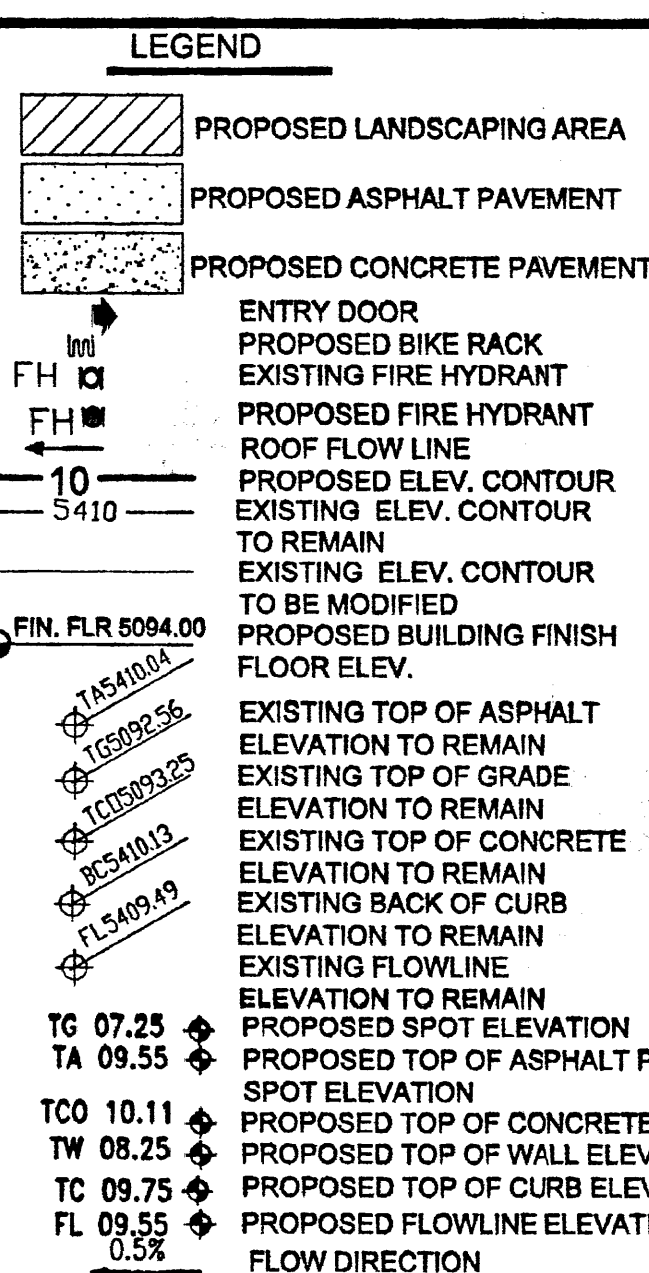
PROJECT TITLE:	MANUFACTURING/WAREHOUSING BUILDINGS		
	8620 & 8840 SUSAN SE		
SHEET TITLE:	SITE PLAN TRAFFIC CIRCULATION LAYOUT		
MAP NO:	L-20-Z	RHOMBUS JOB NO:	05-C2-2
			SHEET 1 OF 1



FIRM MAP NOT TO SCALE MAP #35001C358 E



- NOTICE TO CONTRACTOR**
1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN STREET RIGHT-OF-WAY. AN APPROVED COPY OF THIS PLAN MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
 2. ALL WORK DETAILED ON THIS PLAN TO BE PERFORMED, EXCEPT AS OTHERWISE PROVIDED HEREON, IN ACCORDANCE WITH CITY OF ALBUQUERQUE INTERIM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1985.
 3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE (260-1009) FOR LOCATION OF EXISTING UTILITIES.
 4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH MINIMUM DELAY.
 5. BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE.
 6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
 7. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.
 8. UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON MAPS AND/OR EVIDENCES ON THE GROUND. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATIONS OF ALL UTILITIES, SHOWN OR NOT SHOWN ON THE DRAWING.
 9. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
 10. CONTRACTOR IS RESPONSIBLE FOR KEEPING RUNOFF ON SITE DURING CONSTRUCTION AND CLEANING UP SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY AND ADJOINING PROPERTIES AFTER CONSTRUCTION.



DRAINAGE AND GRADING PLAN

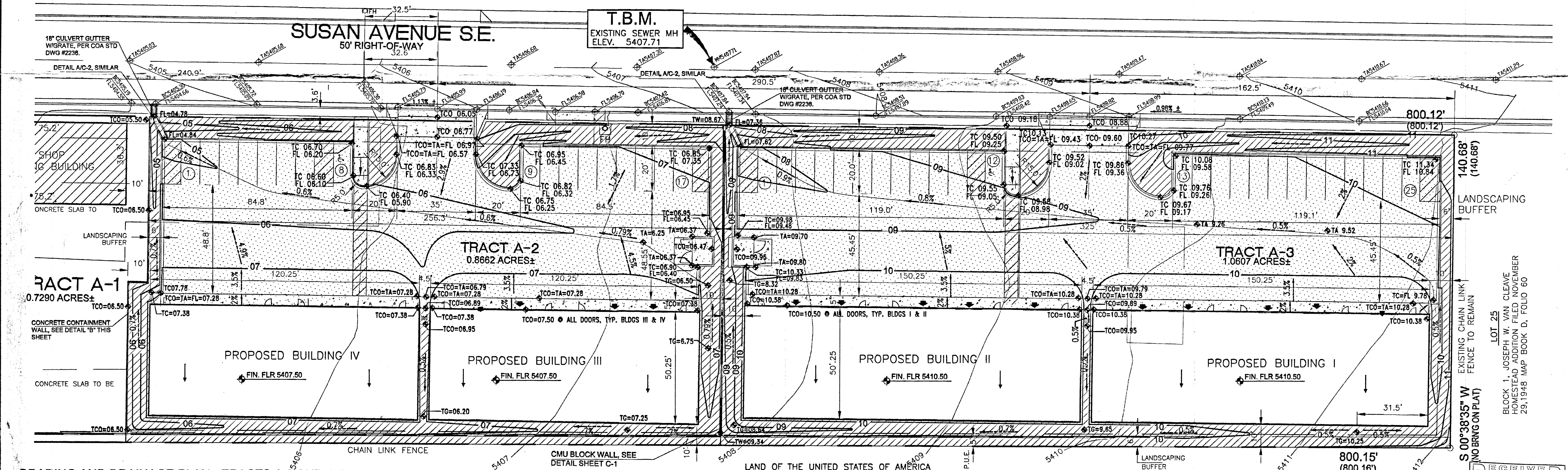
TRACTS A-2 AND A-3, GORLAND SQUARE CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

LEGAL DESCRIPTION
Tract A-2, Gorland Square, City of Albuquerque, New Mexico.
FLOOD HAZARD ZONE
Tract A-2 is located in Flood Hazard Zone X (i.e., Areas determined to be outside 500-year floodplain) designated on the Federal Emergency Management Agency's (FEMA's) Flood Insurance Rate Map Panel No. 35001C0358 E (April 2, 2002).
DRAINAGE ANALYSIS
REFERENCE: City of Albuquerque, Development Process Manual - Vol. 2, Section 22.2 - Hydrology, January, 1993.
Principal Design Storm: 100-year 6-hour event
Precipitation Zone 3 (Table A-1)
Excess Precipitation (Table A-8):
E₁ = 0.66 in (Land Treatment 'A'), E₂ = 0.92 in (Land Treatment 'B'), E₃ = 1.29 in (Land Treatment 'C'), E₄ = 2.36 in (Land Treatment 'D')
Peak Discharge (Table A-9):
Q_{P1} = 1.87 ft³/sec-acre (Land Treatment 'A')
Q_{P2} = 2.60 ft³/sec-acre (Land Treatment 'B')
Q_{P3} = 3.45 ft³/sec-acre (Land Treatment 'C')
Q_{P4} = 5.02 ft³/sec-acre (Land Treatment 'D')
On-Site 'Existing' Condition (Tract A-2):
Tract A-2 Area = 37,749 ft² x 1 acre/43,560 ft² = 0.87 acres
96% Land Treatment 'C', 4% Land Treatment 'D' (Table A-4)
Weighted E = ((E₃ x 0.83 acres) + (E₄ x 0.03 acres))/0.87 acres = 1.33 in
V₃₆₀ = 1.33 in x 0.87 acres x 1 ft/12 in = 0.0864 acre-ft x 43,560 ft²/acre = 4,188 ft³
Total Q_P = (Q_{P3} x 0.83 acres) + (Q_{P4} x 0.03 acres) = 3.04 ft³/sec
On-Site 'Post Development' Condition (Tract A-2):
20.37% Land Treatment 'B', 79.63% Land Treatment 'D'
Weighted E = ((E₂ x 0.18 acres) + (E₄ x 0.69 acres))/0.87 acres = 2.07 in
V₃₆₀ = (2.07 in x 0.87 acres) x 1 ft/12 in = 0.149 acre-ft x 43,560 ft²/acre = 6,501 ft³
Total Q_P = (Q_{P2} x 0.18 acres) + (Q_{P4} x 0.69 acres) = 3.92 ft³/sec
Off-Site 'Existing' Condition:
Offsite Drainage Basin (Tract A-3, Gorland Square, City of Albuquerque, New Mexico).
Tract A-3 Area = 46,212 ft² x 1 acre/43,560 ft² = 1.06 acres
97.18% Land Treatment 'C', 2.82% Land Treatment 'D'
Weighted E = ((E₃ x 1.03 acres) + (E₄ x 0.03 acres))/1.06 acres = 1.32 in
V₃₆₀ = (1.32 in x 1.06 acres) x 1 ft/12 in = 0.117 acre-ft x 43,560 ft²/acre = 5,084 ft³
Total Q_P = (Q_{P3} x 1.03 acres) + (Q_{P4} x 0.03 acres) = 3.71 ft³/sec
Based on the final grading concept, none of the Off-Site 'Existing Condition' runoff enters onto Tract A-2.
As demonstrated by the calculations presented herein, under the 'Post Development Condition' the peak discharge from Tract A-2 will increase by 0.88 ft³/sec. The impact of this increased discharge on the capacity of the Wyoming Boulevard storm drain is negligible; therefore, free discharge from Tract A-2 is recommended.
Free discharge of 'Post Development' runoff from Tract A-2 to Susan Avenue is acceptable for the following reasons:
1. There are no storm water ponds on other development parcels within the off-site drainage basin.
2. The 'Post Development' runoff from Tract A-2 is a small percentage of the total runoff from the off-site drainage basin.
3. Existing curb and gutter in Susan Avenue will intercept and convey nuisance flows to the Wyoming Boulevard storm drain.

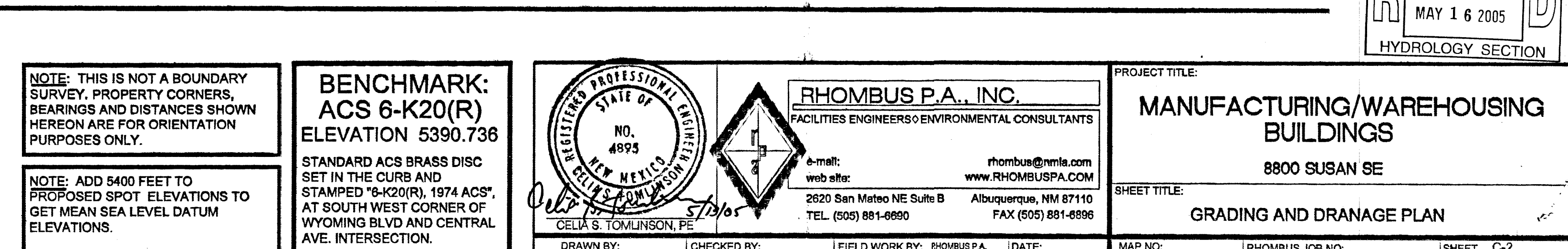
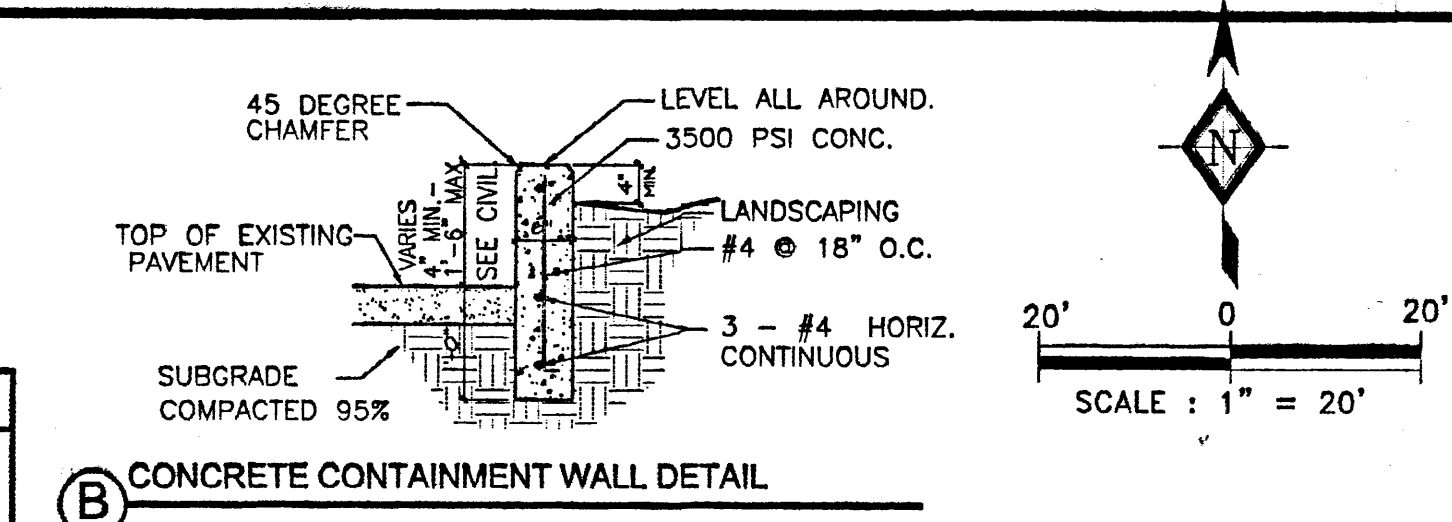
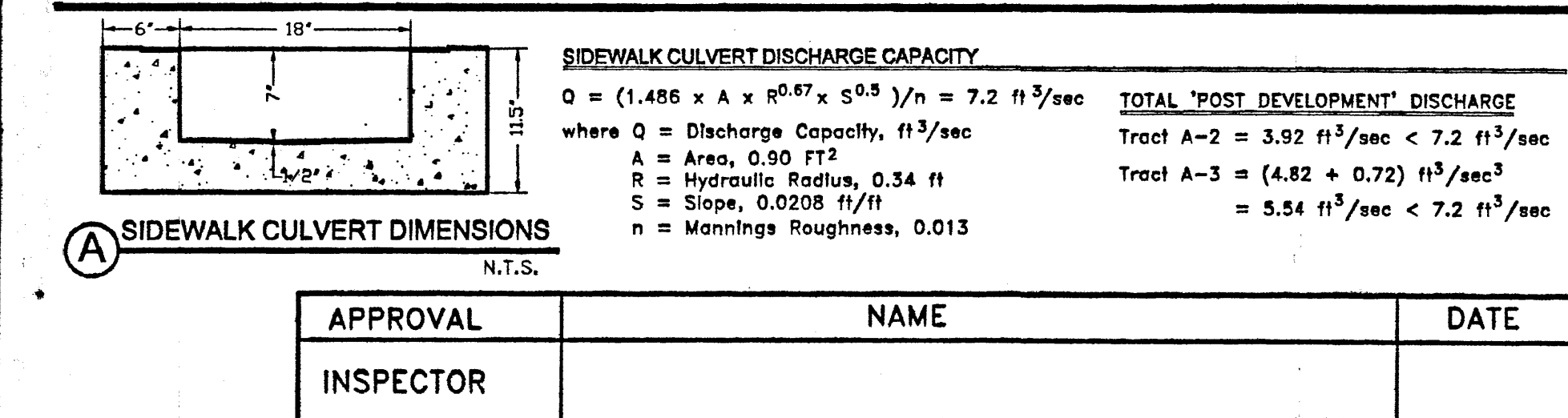
TRACT A-3
LEGAL DESCRIPTION
Tract A-3, Gorland Square (City of Albuquerque, New Mexico).
FLOOD HAZARD ZONE
Tract A-3 is located in Flood Hazard Zone X (i.e., Areas determined to be outside 500-year floodplain) designated on the Federal Emergency Management Agency's (FEMA's) Flood Insurance Rate Map Panel No. 35001C0358 E (April 2, 2002).
DRAINAGE ANALYSIS
REFERENCE: City of Albuquerque, Development Process Manual - Vol. 2, Section 22.2 - Hydrology, January, 1993.
Principal Design Storm: 100-year 6-hour event
Precipitation Zone 3 (Table A-1)
Excess Precipitation (Table A-8):
E₁ = 0.66 in (Land Treatment 'A'), E₂ = 0.92 in (Land Treatment 'B'), E₃ = 1.29 in (Land Treatment 'C'), E₄ = 2.36 in (Land Treatment 'D')
Peak Discharge (Table A-9):
Q_{P1} = 1.87 ft³/sec-acre (Land Treatment 'A')
Q_{P2} = 2.60 ft³/sec-acre (Land Treatment 'B')
Q_{P3} = 3.45 ft³/sec-acre (Land Treatment 'C')
Q_{P4} = 5.02 ft³/sec-acre (Land Treatment 'D')
On-Site 'Existing' Condition (Tract A-3):
Tract A-3 Area = 46,212 ft² x 1 acre/43,560 ft² = 1.06 acres
97.18% Land Treatment 'C', 2.82% Land Treatment 'D'
Weighted E = ((E₃ x 0.01 acres) + (E₄ x 0.08 acres))/1.06 acres = 0.09 acres
V₃₆₀ = (0.09 acres x 1.06 acres) x 1 ft/12 in = 0.0084 acre-ft x 43,560 ft²/acre = 365 ft³
Total Q_P = (Q_{P3} x 0.01 acres) + (Q_{P4} x 0.08 acres) = 0.42 ft³/sec
As demonstrated by the calculations presented herein, under the 'Post Development Condition' the peak discharge from Tract A-3 will increase by 1.11 ft³/sec. The impact of this increased discharge on the capacity of the Wyoming Boulevard storm drain is negligible; therefore, free discharge from Tract A-3 is recommended.
Free discharge of 'Post Development' runoff from Tract A-3 to Susan Avenue is acceptable for the following reasons:
1. There are no storm water ponds on other development parcels within the off-site drainage basin.
2. The 'Post Development' runoff from Tract A-3 is a small percentage of the total runoff from the off-site drainage basin.
3. Existing curb and gutter in Susan Avenue will intercept and convey nuisance flows to the Wyoming Boulevard storm drain.

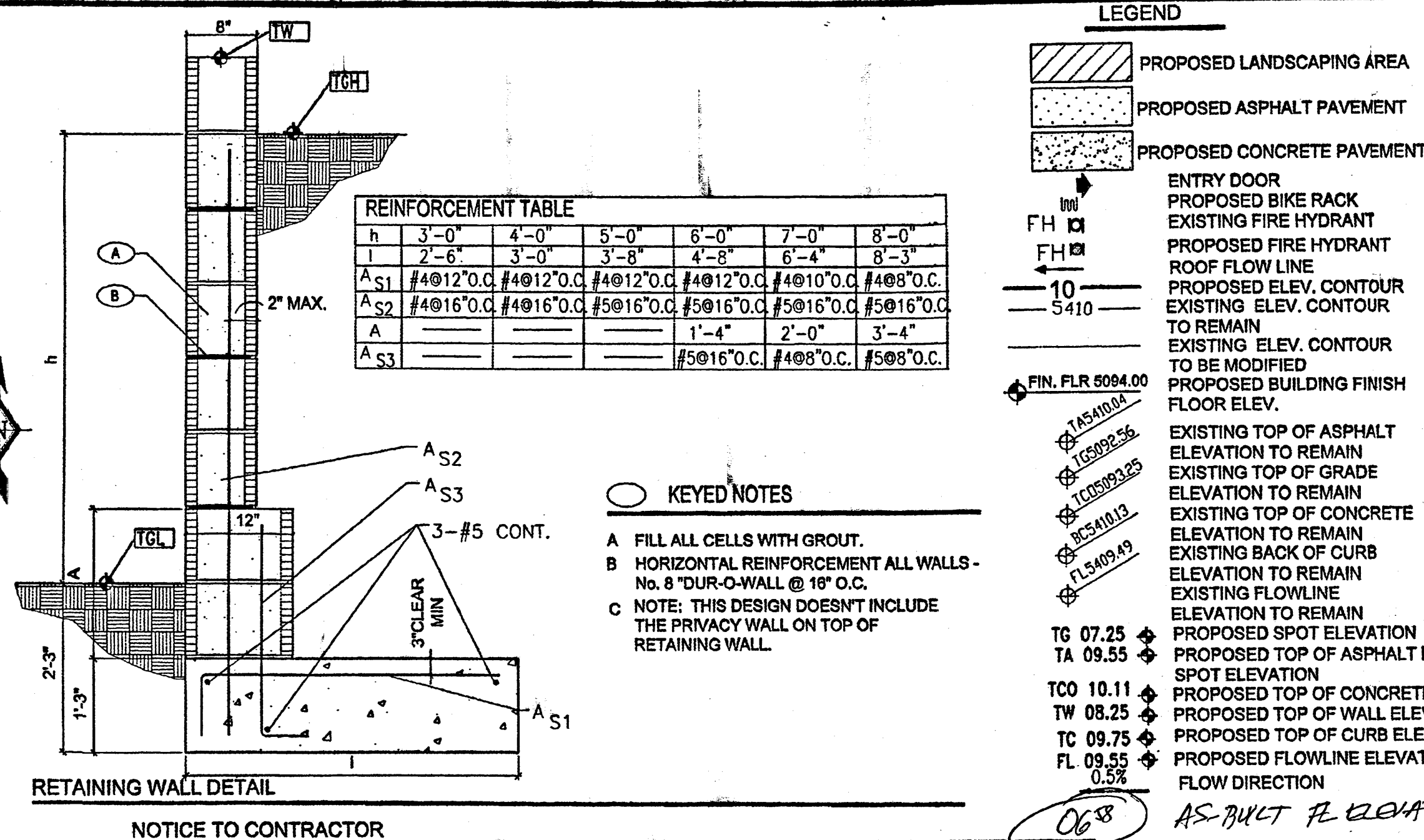
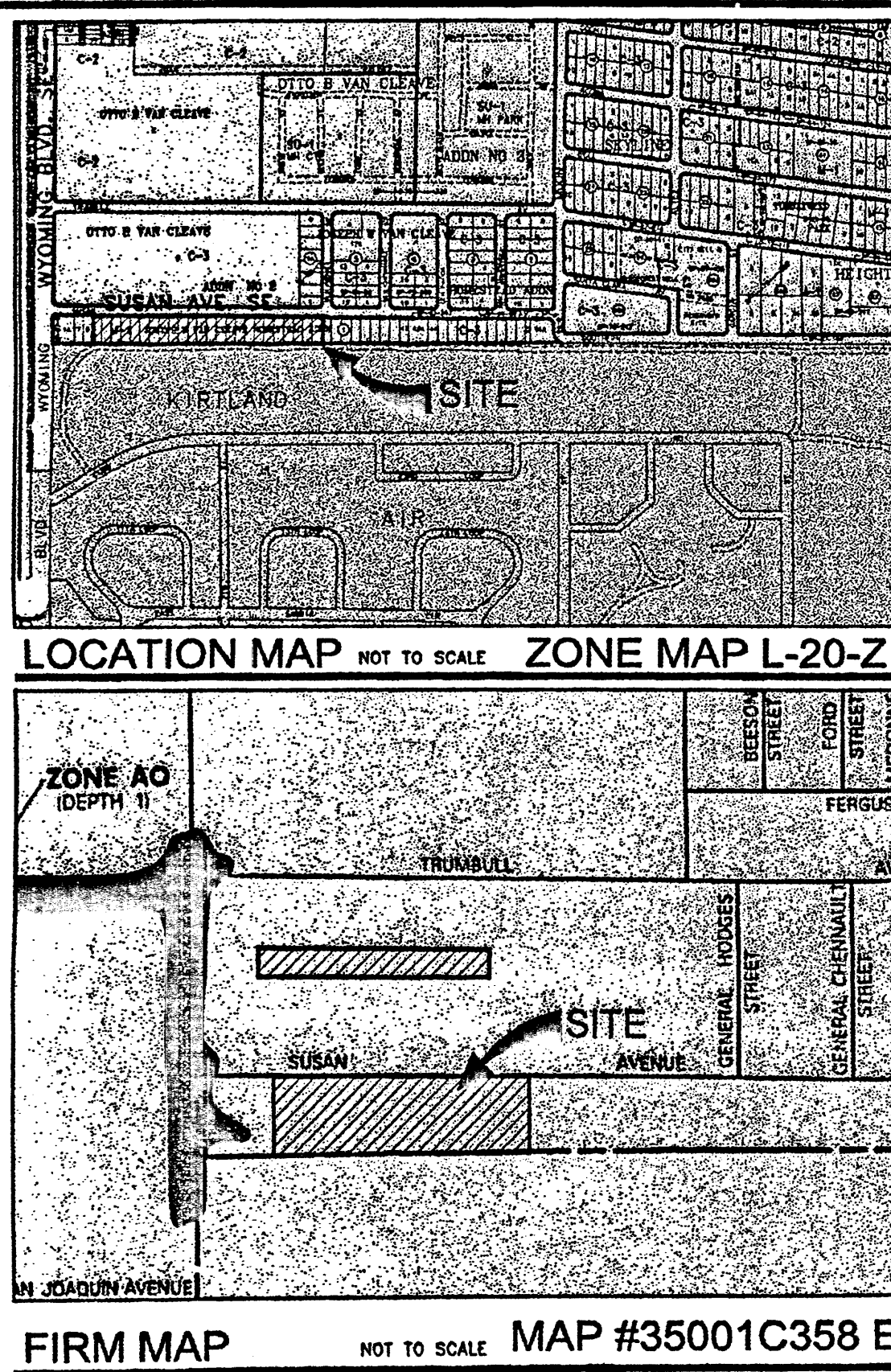
NOTICE TO CONTRACTOR

1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN STREET RIGHT-OF-WAY. AN APPROVED COPY OF THIS PLAN MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
2. ALL WORK DETAILED ON THIS PLAN TO BE PERFORMED, EXCEPT AS OTHERWISE PROVIDED HEREON, IN ACCORDANCE WITH CITY OF ALBUQUERQUE INTERIM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1985.
3. TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE (260-1009) FOR LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH MINIMUM DELAY.
5. BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET USE.
6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
7. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.
8. UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON MAPS AND/OR EVIDENCES ON THE GROUND. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATIONS OF ALL UTILITIES, SHOWN OR NOT SHOWN ON THE DRAWING.
9. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
10. CONTRACTOR IS RESPONSIBLE FOR KEEPING RUNOFF ON SITE DURING CONSTRUCTION AND CLEANING UP SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY AND ADJOINING PROPERTIES AFTER CONSTRUCTION.



GRADING AND DRAINAGE PLAN - TRACTS A-2 AND A-3





DRAINAGE AND GRADING PLAN

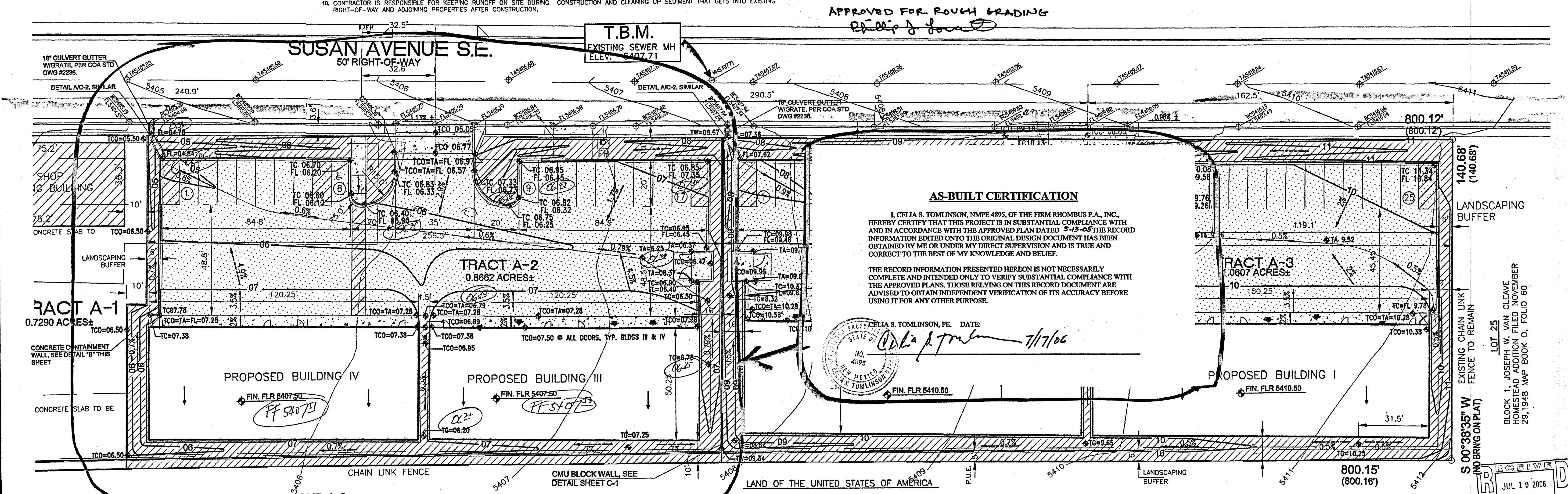
FOR
TRACTS A-2 AND A-3, GORLAND SQUARE CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

TRACT A-2

LEGAL DESCRIPTION
Tract A-2, Gorland Square, City of Albuquerque, New Mexico.
FLOOD HAZARD ZONE
Tract A-2 is located in Flood Hazard Zone X (i.e., Areas determined to be outside 500-year floodplain) designated on the Federal Emergency Management Agency's (FEMA's) Flood Insurance Rate Map Panel No. 35001C0358 E (April 2, 2002).
DRAINAGE ANALYSIS
REFERENCE: City of Albuquerque, Development Process Manual - Vol. 2, Section 22.2 - Hydrology, January, 1993.
Principal Design Storm: 100-year 6-hour event
Precipitation Zone 3 (Table A-1)
Excess Precipitation (Table A-8):
E₁ = 0.66 in (Land Treatment 'A'), E₂ = 0.92 in (Land Treatment 'B'), E₃ = 1.29 in (Land Treatment 'C'), E₄ = 2.36 in (Land Treatment 'D')
Peak Discharge (Table A-9):
Q_{p1} = 1.87 ft³/sec-acre (Land Treatment 'A')
Q_{p2} = 2.60 ft³/sec-acre (Land Treatment 'B')
Q_{p3} = 3.45 ft³/sec-acre (Land Treatment 'C')
Q_{p4} = 5.02 ft³/sec-acre (Land Treatment 'D')
On-Site 'Existing' Condition (Tract A-2):
Tract A-2 Area = 37,749 ft² x 1 acre/43,560 ft² = 0.87 acres
96% Land Treatment 'C', 4% Land Treatment 'D' (Table A-4)
Weighted E = ((E₂ x 0.83 acres) + (E₄ x 0.03 acres))/0.87 acres = 1.33 in
V₃₆₀ = 1.33 in x 0.87 acres x 1 ft/12 in = 0.0964 acre-ft x 43,560 ft²/acre = 4,196 ft³
Total Q_p = (Q_{p3} x 0.83 acres) + (Q_{p4} x 0.03 acres) = 3.04 ft³/sec
On-Site 'Post Development' Condition (Tract A-2):
20.37% Land Treatment 'B', 79.63% Land Treatment 'D'
Weighted E = ((E₂ x 0.18 acres) + (E₄ x 0.69 acres))/0.87 acres = 2.07 in
V₃₆₀ = (2.07 in x 0.87 acres) x 1 ft/12 in = 0.149 acre-ft x 43,560 ft²/acre = 6,501 ft³
Total Q_p = (Q_{p2} x 0.18 acres) + (Q_{p4} x 0.69 acres) = 3.92 ft³/sec
Off-Site 'Existing' Condition:
Off-site Drainage Basin (Tract A-3, Gorland Square, City of Albuquerque, New Mexico).
Tract A-3 Area = 46,212 ft² x 1 acre/43,560 ft² = 1.06 acres
97.18% Land Treatment 'C', 2.82% Land Treatment 'D'
Weighted E = ((E₃ x 1.03 acres) + (E₄ x 0.03 acres))/1.06 acres = 1.32 in
V₃₆₀ = (1.32 in x 1.06 acres) x 1 ft/12 in = 0.117 acre-ft x 43,560 ft²/acre = 5,084 ft³
Total Q_p = (Q_{p3} x 1.03 acres) + (Q_{p4} x 0.03 acres) = 3.71 ft³/sec
Based on the final grading concept, none of the Off-Site 'Existing Condition' runoff enters onto Tract A-2.
As demonstrated by the calculations presented herein, under the 'Post Development' Condition, the peak discharge from Tract A-2 will increase by 0.89 ft³/sec. The impact of this increased discharge on the capacity of the Wyoming Boulevard storm drain is negligible; therefore, free discharge from Tract A-2 is recommended.
Free discharge of 'Post Development' runoff from Tract A-2 to Susan Avenue is acceptable for the following reasons:
1. There are no storm water ponds on other development parcels within the off-site drainage basin.
2. The 'Post Development' runoff from Tract A-2 is a small percentage of the total runoff from the off-site drainage basin.
3. Existing curb and gutter in Susan Avenue will intercept and convey nuisance flows to the Wyoming Boulevard storm drain.

TRACT A-3

LEGAL DESCRIPTION
Tract A-3, Gorland Square (City of Albuquerque, New Mexico).
FLOOD HAZARD ZONE
Tract A-3 is located in Flood Hazard Zone X (i.e., Areas determined to be outside 500-year floodplain) designated on the Federal Emergency Management Agency's (FEMA's) Flood Insurance Rate Map Panel No. 35001C0358 E (April 2, 2002).
DRAINAGE ANALYSIS
REFERENCE: City of Albuquerque, Development Process Manual - Vol. 2, Section 22.2 - Hydrology, January, 1993.
Principal Design Storm: 100-year 6-hour event
Precipitation Zone 3 (Table A-1)
Excess Precipitation (Table A-8):
E₁ = 0.66 in (Land Treatment 'A'), E₂ = 0.92 in (Land Treatment 'B'), E₃ = 1.29 in (Land Treatment 'C'), E₄ = 2.36 in (Land Treatment 'D')
Peak Discharge (Table A-9):
Q_{p1} = 1.87 ft³/sec-acre (Land Treatment 'A')
Q_{p2} = 2.60 ft³/sec-acre (Land Treatment 'B')
Q_{p3} = 3.45 ft³/sec-acre (Land Treatment 'C')
Q_{p4} = 5.02 ft³/sec-acre (Land Treatment 'D')
On-Site 'Existing' Condition (Tract A-3):
Tract A-3 Area = 46,212 ft² x 1 acre/43,560 ft² = 1.06 acres
97.18% Land Treatment 'C', 2.82% Land Treatment 'D'
Weighted E = ((E₃ x 1.03 acres) + (E₄ x 0.03 acres))/1.06 acres = 1.32 in
V₃₆₀ = (1.32 in x 1.06 acres) x 1 ft/12 in = 0.117 acre-ft x 43,560 ft²/acre = 5,084 ft³
Total Q_p = (Q_{p3} x 1.03 acres) + (Q_{p4} x 0.03 acres) = 3.71 ft³/sec
On-Site 'Post Development' Condition (Tract A-3):
19.51% Land Treatment 'B', 80.49% Land Treatment 'D'
Weighted E = ((E₂ x 0.21 acres) + (E₄ x 0.85 acres))/1.06 acres = 2.21 in
V₃₆₀ = (2.21 in x 1.06 acres) x 1 ft/12 in = 0.184 acre-ft x 43,560 ft²/acre = 8,007 ft³
Total Q_p = (Q_{p2} x 0.21 acres) + (Q_{p4} x 0.85 acres) = 4.82 ft³/sec
Off-Site 'Existing' Condition:
Off-site Drainage Basin (Lot 25, Block 1, Joseph W. Van Cleave Homestead Addition).
Drainage Basin Area = 7,415 ft² x 1 acre/43,560 ft² = 0.17 acres
7.83% Land Treatment 'B', 37.34% Land Treatment 'C', 54.83% Land Treatment 'D'
Weighted E = ((E₂ x 0.01 acres) + (E₃ x 0.06 acres) + (E₄ x 0.09 acres))/0.17 acres = 1.85 in
V₃₆₀ = (1.85 in x 0.17 acres) x 1 ft/12 in = 0.026 acre-ft x 43,560 ft²/acre = 1,142 ft³
Total Q_p = (Q_{p2} x 0.01 acres) + (Q_{p3} x 0.06 acres) + (Q_{p4} x 0.09 acres) = 0.72 ft³/sec
As demonstrated by the calculations presented herein, under the 'Post Development' Condition, the peak discharge from Tract A-3 will increase by 1.11 ft³/sec. The impact of this increased discharge on the capacity of the Wyoming Boulevard storm drain is negligible; therefore, free discharge from Tract A-3 is recommended.
Free discharge of 'Post Development' runoff from Tract A-3 to Susan Avenue is acceptable for the following reasons:
1. There are no storm water ponds on other development parcels within the off-site drainage basin.
2. The 'Post Development' runoff from Tract A-3 is a small percentage of the total runoff from the off-site drainage basin.
3. Existing curb and gutter in Susan Avenue will intercept and convey nuisance flows to the Wyoming Boulevard storm drain.



APPROVED FOR ROUGH GRADING
Philip J. Jones

AS-BUILT CERTIFICATION

I, CELIA S. TOMLINSON, NMPE 4895, OF THE FIRM RHOMBUS P.A., INC., HEREBY CERTIFY THAT THIS PROJECT IS IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE APPROVED PLAN DATED 5-13-05 THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED BY ME OR UNDER MY DIRECT SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE WITH THE AS-BUILT PLANS. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

CELIA S. TOMLINSON, PE. DATE: *Celia S. Tomlinson* 7/17/06
FIN. FLR 5410.50

SIDEWALK CULVERT DISCHARGE CAPACITY

$Q = (1.486 \times A \times R^{0.67} \times S^{0.5}) / n = 7.2 \text{ ft}^3/\text{sec}$
where Q = Discharge Capacity, ft³/sec
A = Area, 0.90 FT²
R = Hydraulic Radius, 0.34 ft
S = Slope, 0.0208 ft/ft
n = Mannings Roughness, 0.013

SIDEWALK CULVERT DIMENSIONS

N.T.S.

TOTAL 'POST DEVELOPMENT' DISCHARGE

Tract A-2 = 3.92 ft³/sec < 7.2 ft³/sec
Tract A-3 = (4.82 + 0.72) ft³/sec = 5.54 ft³/sec < 7.2 ft³/sec

CONCRETE CONTAINMENT WALL DETAIL

45 DEGREE CHAMFER
LEVEL ALL AROUND.
3500 PSI CONC.
LANDSCAPING
#4 @ 18" O.C.
3 - #4 HORIZ. CONTINUOUS
SUBGRADE COMPACTED 95%

NOTE: THIS IS NOT A BOUNDARY SURVEY. PROPERTY CORNERS, BEARINGS AND DISTANCES SHOWN HEREON ARE FOR ORIENTATION PURPOSES ONLY.

NOTE: ADD 5400 FEET TO PROPOSED SPOT ELEVATIONS TO GET MEAN SEA LEVEL DATUM ELEVATIONS.

BENCHMARK:
ACS 6-K20(R)
ELEVATION 5390.736

STANDARD ACS BRASS DISC SET IN THE CURB AND STAMPED "6-K20(R), 1974 ACS", AT SOUTH WEST CORNER OF WYOMING BLVD AND CENTRAL AVE. INTERSECTION.

PROFESSIONAL ENGINEER
CELIA S. TOMLINSON, PE.
NO. 4895
STATE OF NEW MEXICO

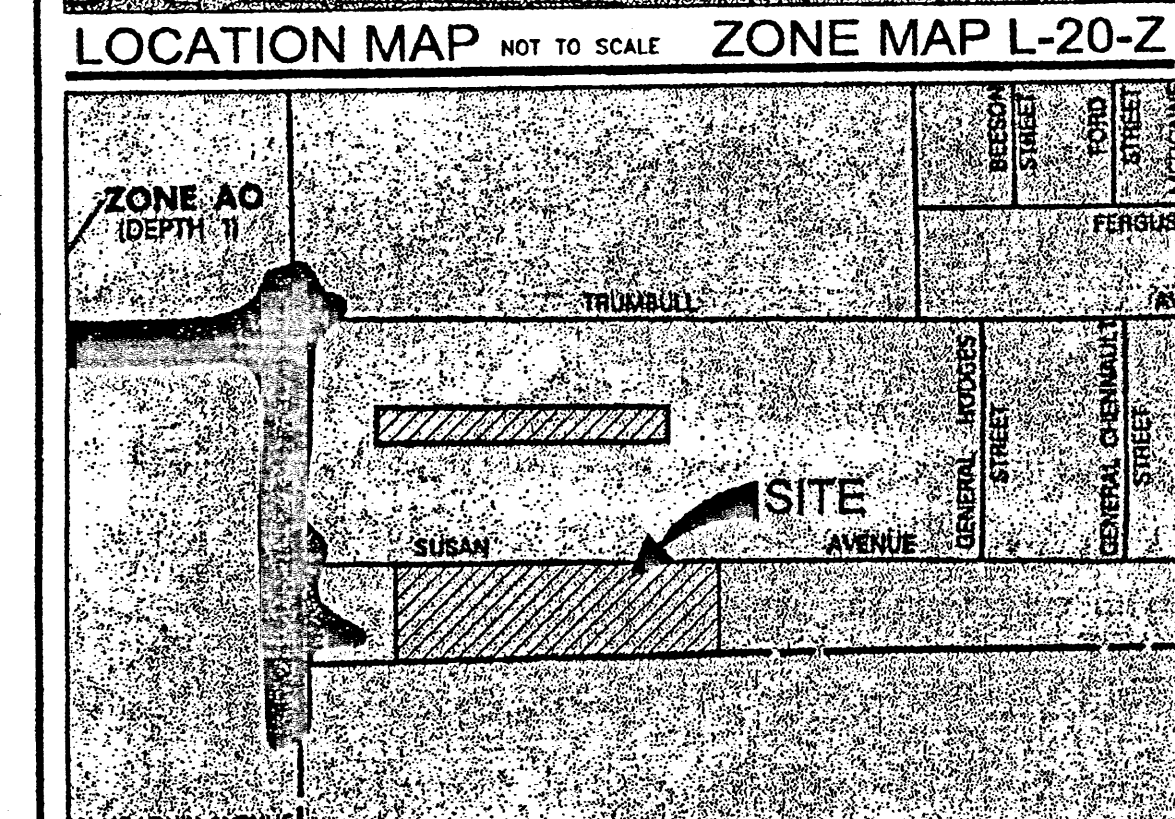
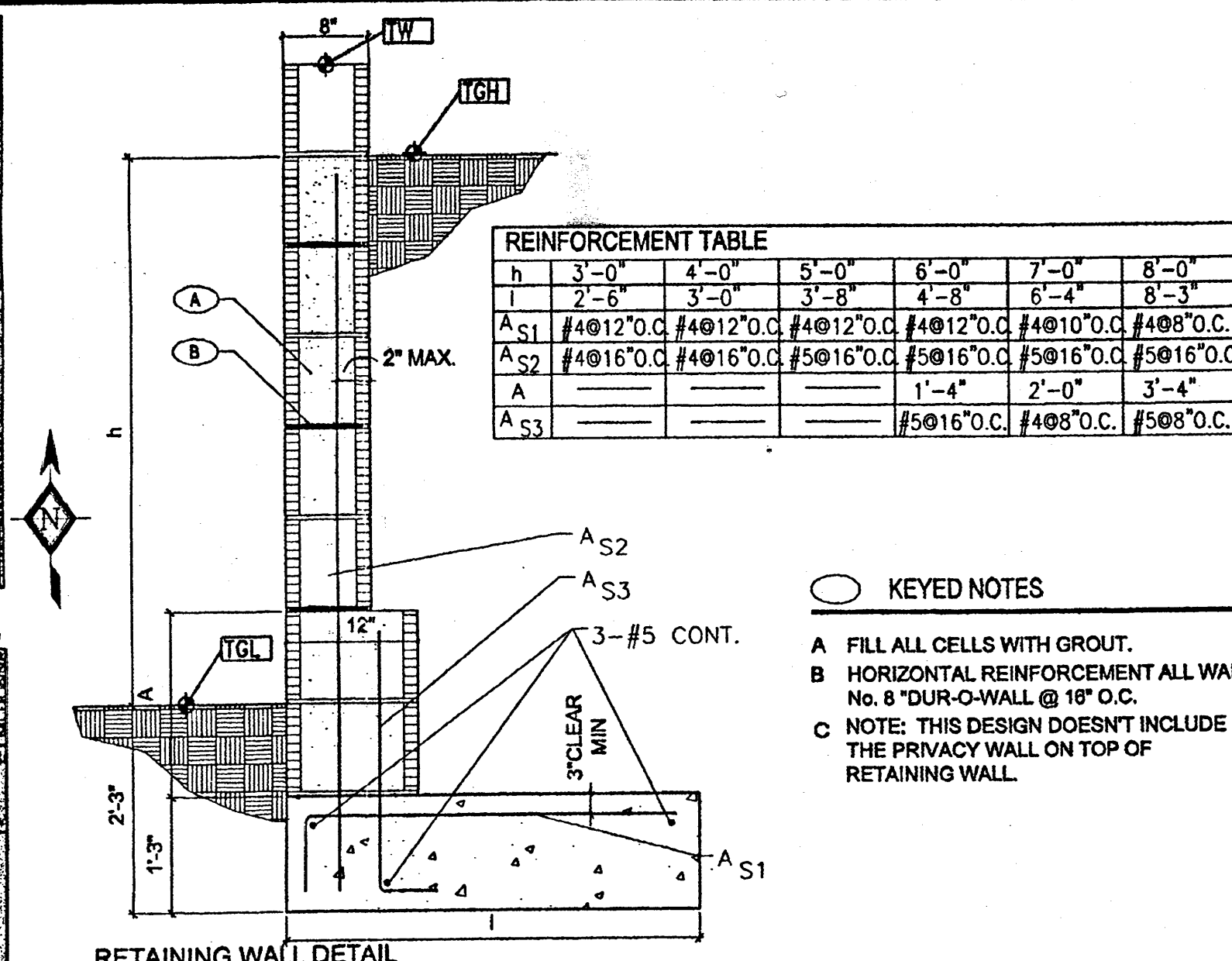
RHOMBUS P.A., INC.
FACILITIES ENGINEERS/ENVIRONMENTAL CONSULTANTS
e-mail: rhombus@nmia.com
www.RHOMBUSPA.COM
2620 San Mateo NE Suite B Albuquerque, NM 87110
TEL (505) 881-6890 FAX (505) 881-6896

PROJECT TITLE: MANUFACTURING/WAREHOUSING BUILDINGS
8620 4049 SUSAN SE

SHEET TITLE: GRADING AND DRAINAGE PLAN

MAP NO: 1-067 **RHOMBUS JOB NO:** 06-022 **SHEET:** C-2

APPROVAL: _____ **NAME:** _____ **DATE:** _____



h	3'-0"	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"
i	2'-6"	3'-0"	3'-8"	4'-8"	6'-4"	8'-3"
A _{S1}	#4@12"O.C.	#4@12"O.C.	#4@12"O.C.	#4@12"O.C.	#4@10"O.C.	#4@8"O.C.
A _{S2}	#4@16"O.C.	#4@16"O.C.	#5@16"O.C.	#5@16"O.C.	#5@16"O.C.	#5@16"O.C.
A	_____	_____	_____	1'-4"	2'-0"	3'-4"
A _{S3}	_____	_____	_____	#5@16"O.C.	#4@8"O.C.	#5@8"O.C.

- LEGEND**



PROPOSED LANDSCAPING AREA



PROPOSED ASPHALT PAVEMENT



PROPOSED CONCRETE PAVEMENT



ENTRY DOOR
PROPOSED BIKE RACK
EXISTING FIRE HYDRANT
PROPOSED FIRE HYDRANT
ROOF FLOW LINE
PROPOSED ELEV. CONTOUR
EXISTING ELEV. CONTOUR
TO REMAIN
EXISTING ELEV. CONTOUR
TO BE MODIFIED
PROPOSED BUILDING FINISH
FLOOR ELEV.



FIN. FLR 5094.00



75.50004



105.00256



105.00256



85.50013



15.50049

EXISTING TOP OF ASPHALT
ELEVATION TO REMAIN
EXISTING TOP OF GRADE
ELEVATION TO REMAIN
EXISTING TOP OF CONCRETE
ELEVATION TO REMAIN
EXISTING BACK OF CURB
ELEVATION TO REMAIN
EXISTING FLOWLINE
ELEVATION TO REMAIN

PROPOSED SPOT ELEVATION
PROPOSED TOP OF ASPHALT
SPOT ELEVATION
PROPOSED TOP OF CONCRETE
PROPOSED TOP OF WALL ELEVATION
PROPOSED TOP OF CURB ELEVATION
PROPOSED FLOWLINE ELEVATION
FLOW DIRECTION

TG 07.25 
 TA 09.55 
 TCO 10.11 
 TW 08.25 
 TW 09.75 
 FL 09.55 
 0.5% 

KEYED NOTES

A FILL ALL CELLS WITH GROUT.

B HORIZONTAL REINFORCEMENT ALL WALLS - No. 8 "DUR-O-WALL @ 18" O.C.

C NOTE: THIS DESIGN DOESN'T INCLUDE THE PRIVACY WALL ON TOP OF RETAINING WALL.

NOTICE TO CONTRACTOR

1. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN STREET RIGHT-OF-WAY. AN APPROVED COPY OF THIS PLAN MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
2. ALL WORK DETAILED ON THIS PLAN TO BE PERFORMED, EXCEPT AS OTHERWISE PROVIDED HEREON, IN ACCORDANCE WITH CITY OF ALBUQUERQUE INTERIOR STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
3. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN A LOCATION SERVICE (260-1009) FOR LOCATION OF EXISTING UTILITIES AND RECORD THE RESULTS OF THE LOCATION SERVICE ON THE EXCAVATION.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH MINIMUM DELAY.
5. BACKFILL COMPACTION SHALL BE ACCORDING TO TRAFFIC/STREET CLOSURE REQUIREMENTS.
6. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.
7. WORK ON ARTERIAL STREETS SHALL BE PERFORMED ON A 24-HOUR BASIS.
8. UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON MAPS AND/OR EVIDENCE ON THE GROUND. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATIONS OF ALL UTILITIES, SHOWN OR NOT SHOWN ON THE DRAWING.
9. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING TO ORIGINAL CONDITION ANY TOPSOIL DISTURBANCE PERMIT PRIOR TO BEGINNING WORK.
10. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING RUNOFF ON SITE DURING CONSTRUCTION AND CLEANING UP SEDIMENT THAT GETS INTO EXISTING RIGHT-OF-WAY AND ADJOINING PROPERTIES AFTER CONSTRUCTION.

DRAINAGE AND GRADING PLAN
FOR
TRACTS A-2 AND A-3, GORLAND SQUARE CITY OF ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO

LEGAL DESCRIPTION
 Tract A-1 = Corland Square, City of Albuquerque, New Mexico.

FLOOD HAZARD ZONE
 Tract A-2 is located in Flood Hazard Zone X (i.e., Areas determined to be outside 500-year floodplain) designated on the Federal Emergency Management Agency's (FEMA's) Flood Insurance Rate Map Panel No. 35001C0358 E (April 2, 2002).

DRAINAGE ANALYSIS
 REFERENCE: City of Albuquerque, Development Process Manual - Vol. 2, Section 22.2 - Hydrology, January, 1993.
 Principal Design Storm: 100-year 6-hour event
 Precipitation Zone 3 (Table A-1)
 Excess Precipitation (Table A-8)
 $E_1 = 0.66$ in (Land Treatment 'A'), $E_2 = 0.92$ in (Land Treatment 'B')
 $E_3 = 1.29$ in (Land Treatment 'C'), & $E_4 = 2.36$ in (Land Treatment 'D')
 Peak Discharge (Table A-9):
 $Q_{P1} = 1.87 \text{ ft}^3/\text{sec-acre}$ (Land Treatment 'A')
 $Q_{P2} = 2.60 \text{ ft}^3/\text{sec-acre}$ (Land Treatment 'B')
 $Q_{P3} = 3.45 \text{ ft}^3/\text{sec-acre}$ (Land Treatment 'C')
 $Q_{P4} = 5.02 \text{ ft}^3/\text{sec-acre}$ (Land Treatment 'D')

On-Site 'Existing' Condition (Tract A-2):
 Tract A-2 Area = $37,749 \text{ ft}^2 \times 1 \text{ acre}/43,560 \text{ ft}^2 = 0.87 \text{ acres}$
 96% Land Treatment 'C', 4% Land Treatment 'D' (Table A-4)
 Weighted $E = ((E_3 \times 0.83 \text{ acres}) + (E_4 \times 0.03 \text{ acres}))/0.87 \text{ acres}$
 $= 1.33 \text{ in}$
 $V_{360} = 1.33 \text{ in} \times 0.87 \text{ acres} \times 1 \text{ ft}/12 \text{ in}$
 $= 0.0964 \text{ acre-ft} \times 43,560 \text{ ft}^2/\text{acre}$
 $= 4,186 \text{ ft}^3$

Total $Q_P = (Q_{P3} \times 0.83 \text{ acres}) + (Q_{P4} \times 0.03 \text{ acres})$
 $= 3.04 \text{ ft}^3/\text{sec}$

On-Site 'Proposed' Condition (Tract A-2):
 20.37% Land Treatment 'B', 79.63% Land Treatment 'D'
 Weighted $E = ((E_2 \times 0.18 \text{ acres}) + (E_4 \times 0.69 \text{ acres}))/0.87 \text{ acres}$
 $= 2.07 \text{ in}$
 $V_{360} = (2.07 \text{ in} \times 0.87 \text{ acres}) \times 1 \text{ ft}/12 \text{ in}$
 $= 0.149 \text{ acre-ft} \times 43,560 \text{ ft}^2/\text{acre}$
 $= 6,501 \text{ ft}^3$

Total $Q_P = (Q_{P2} \times 0.18 \text{ acres}) + (Q_{P4} \times 0.69 \text{ acres})$
 $= 3.92 \text{ ft}^3/\text{sec}$

Off-Site 'Existing' Condition:
 Offsite Drainage Basin (Tract A-3, Corland Square, City of Albuquerque, New Mexico).
 Tract A-3 Area = $48,212 \text{ ft}^2 \times 1 \text{ acre}/43,560 \text{ ft}^2 = 1.06 \text{ acres}$
 97.18% Land Treatment 'C', 2.82% Land Treatment 'D'
 Weighted $E = ((E_3 \times 1.03 \text{ acres}) + (E_4 \times 0.03 \text{ acres}))/1.06 \text{ acres}$
 $= 1.32 \text{ in}$

$$V_{\text{see}} = \{1.32 \text{ in } \times 1.06 \text{ acres}\} \times 1 \text{ ft}/12 \text{ in}$$

$$= 0.117 \text{ acre-ft} \times 43,560 \text{ ft}^2/\text{acre}$$

$$= 5,084 \text{ ft}^3$$

$$\text{Total } Q_p = (Q_{p3} \times 0.03 \text{ acres}) + (Q_{p4} \times 0.03 \text{ acres})$$

$$= 3.71 \text{ ft}^3/\text{sec}$$

Based on the final grading concept, none of the Off-Site 'Existing Condition' runoff enters onto Tract A-2.

As demonstrated by the calculations presented herein, under the 'Post Development' condition, the storm discharge from Tract A-2 will increase by 0.88 ft³/sec. The impact of this increased discharge on the capacity of the Wyoming Boulevard storm drain is negligible; therefore, zero discharge from Tract A-2 is recommended.

Free discharge of 'Post Development' runoff from Tract A-2 to the main avenue is acceptable for the following reasons:

1. There are no storm water ponds on other development parcels within the off-site drainage basin.
2. The 'Post Development' runoff from the off-site drainage basin is a small percentage of the total runoff from the off-site drainage basin.
3. Existing curb and gutter in Susan Avenue will intercept and convey nuisance flows to the Wyoming Boulevard storm drain.

TRACT A-3

LEGAL DESCRIPTION
Tract A-3, Gortland Square (City of Albuquerque, New Mexico).
FLOOD HAZARD ZONE
Tract A-3 is located in Flood Hazard Zone X (i.e., Areas determined to be outside 500-year floodplain) designated on the Federal Emergency Management Agency's (FEMA's) Flood Insurance Rate Map Panel No. 35001C0358 E (April 2, 2002).
DRAINAGE ANALYSIS
REFERENCE: City of Albuquerque, Development Process Manual - Vol. 1.

Section 22.2 - Hydrology, January, 1993.
Principal Design Storm: 100-year 6-hour event
Precipitation Zone 3 (Table A-1)
Excess Precipitation (Table A-8):
 $E_1 = 0.66$ in (Land Treatment 'A')
 $E_2 = 1.1$ in (Land Treatment 'B')
 $E_3 = 1.29$ in (Land Treatment 'C')
 $E_4 = 2.36$ in (Land Treatment 'D')

Peak Discharge (Table A-9):
 $Q_{P1} = 1.87$ ft³/sec-acre (Land Treatment 'A')
 $Q_{P2} = 2.60$ ft³/sec-acre (Land Treatment 'B')
 $Q_{P3} = 3.45$ ft³/sec-acre (Land Treatment 'C')
 $Q_{P4} = 5.02$ ft³/sec-acre (Land Treatment 'D')

On-Site 'Existing' Condition (Tract A-3):

Tract A-3 Area = $46,212 \text{ ft}^2 \times 1 \text{ acre}/43,560 \text{ ft}^2 = 1.06 \text{ acres}$
 97.18% Land Treatment 'C', 2.82% Land Treatment 'D'
 Weighted E = $((E_2 \times 1.03 \text{ acres}) + (E_4 \times 0.03 \text{ acres}))/1.06 \text{ acres}$
 $= 1.32 \text{ in}$

$V_{360} = (1.32 \text{ in} \times 1.06 \text{ acres}) \times 1 \text{ ft}/12 \text{ in}$
 $= 0.117 \text{ acre-ft} \times 43,560 \text{ ft}^2/\text{acre}$
 $= 5,084 \text{ ft}^3$

Total Qp = $(Q_{P1} \times 1.03 \text{ acres}) + (Q_{P4} \times 0.03 \text{ acres})$
 $= 3.71 \text{ ft}^3/\text{sec}$

On-Site 'Post Development' Condition (Tract A-3):

19.51% Land Treatment 'B', 80.49% Land Treatment 'D'
 Weighted E = $((E_2 \times 0.21 \text{ acres}) + (E_4 \times 0.85 \text{ acres}))/1.06 \text{ acres}$
 $= 2.21 \text{ in}$

$V_{360} = (2.21 \text{ in} \times 1.06 \text{ acres}) \times 1 \text{ ft}/12 \text{ in}$
 $= 0.184 \text{ acre-ft} \times 43,560 \text{ ft}^2/\text{acre}$
 $= 8,007 \text{ ft}^3$

Total Qp = $(Q_{P2} \times 0.21 \text{ acres}) + (Q_{P4} \times 0.85 \text{ acres})$
 $= 4.82 \text{ ft}^3/\text{sec}$

Off-Site 'Existing' Condition:

Orville Drainage Basin (Lot 25, Block 1, Joseph W. Van Cleave Homestead Addition),
 Drainage Basin Area = $7,415 \text{ ft}^2 \times 1 \text{ acre}/43,560 \text{ ft}^2 = 1.06 \text{ acres}$
 7.83% Land Treatment 'B', 37.34% Land Treatment 'C', 54.83% Land Treatment 'D'

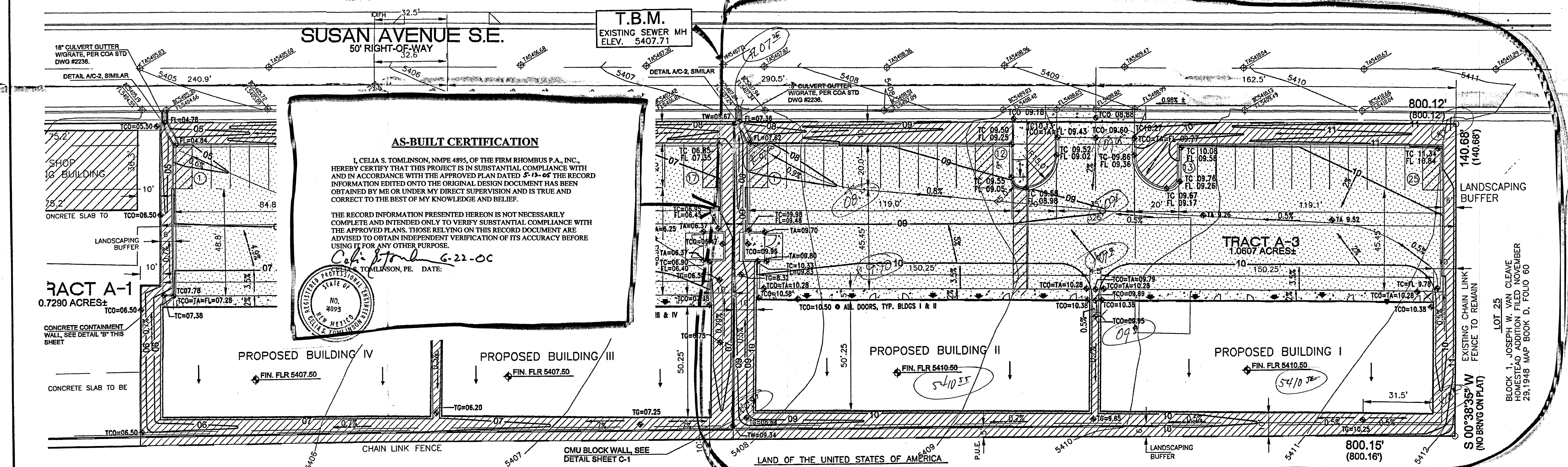
Weighted E = $((E_2 \times 0.01 \text{ acres}) + (E_3 \times 0.06 \text{ acres}) + (E_4 \times 0.09 \text{ acres}))/0.17 \text{ acres}$
 $= 1.85 \text{ in}$

$V_{360} = (1.85 \text{ in} \times 0.17 \text{ acres}) \times 1 \text{ ft}/12 \text{ in}$
 $= 0.026 \text{ acre-ft} \times 43,560 \text{ ft}^2/\text{acre}$
 $= 1,142 \text{ ft}^3$

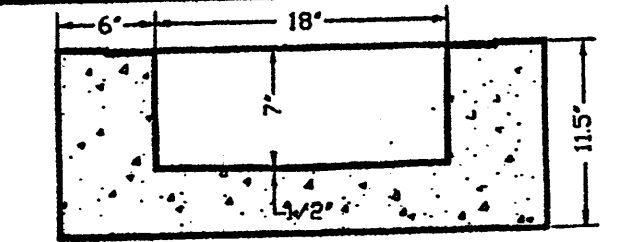
Total Qp = $(Q_{P2} \times 0.01 \text{ acres}) + (Q_{P3} \times 0.06 \text{ acres}) + (Q_{P4} \times 0.09 \text{ acres})$
 $= 0.72 \text{ ft}^3/\text{sec}$

As demonstrated by the calculations presented herein, under the 'Post Development' Condition the peak discharge from Tract A-3 will increase by 1.11 ft /sec. The impact of this increased discharge on the capacity of the Wyoming Boulevard storm drain is negligible; therefore, free discharge from Tract A-3 is recommended. Free discharge from 'Post Development' runoff from Tract A-3 to Susan Avenue is acceptable for the following reasons:

1. There are no storm water ponds on other development parcels within the off-site drainage basin.
2. The 'Post Development' runoff from Tract A-3 is a small percentage of the total runoff from the off-site drainage basin.
3. Existing curb and gutter in Susan Avenue will intercept and convey nuisance flows to the Wyoming Boulevard storm drain.



GRADING AND DRAINAGE PLAN - TRACTS A-2 AND A-3



SIDEWALK CULVERT DISCHARGE CAPACITY

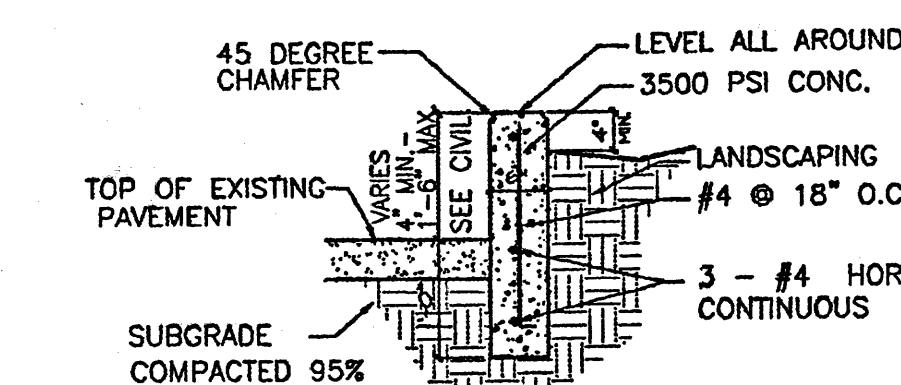
$$Q = (1.486 \times A \times R^{0.67} \times S^{0.5}) / n = 7.2 \text{ ft}^3/\text{sec}$$

where Q = Discharge Capacity, ft³/sec
 A = Area, 0.90 FT²
 R = Hydraulic Radius, 0.34 ft
 S = Slope, 0.0208 ft/ft
 n = Mannings Roughness, 0.013

TOTAL "POST DEVELOPMENT" DISCHARGE

Tract A-2 = $332 \text{ ft}^3/\text{sec} < 7.2 \text{ ft}^3/\text{sec}$

Tract A-3 = $(482 + 0.72) \text{ ft}^3/\text{sec}^3$
= $554 \text{ ft}^3/\text{sec} < 7.2 \text{ ft}^3/\text{sec}$

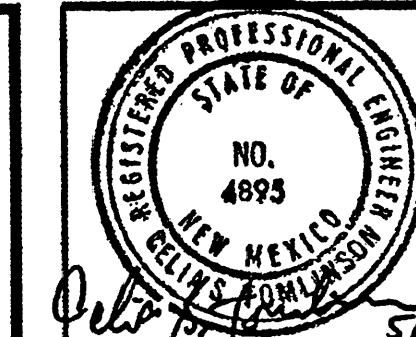


NOTE: THIS IS NOT A BOUNDARY SURVEY. PROPERTY CORNERS, BEARINGS AND DISTANCES SHOWN HEREON ARE FOR ORIENTATION PURPOSES ONLY.

**NOTE: ADD 5400 FEET TO
PROPOSED SPOT ELEVATIONS TO
GET MEAN SEA LEVEL DATUM
ELEVATIONS.**

BENCHMARK:
ACS 6-K20(R)
ELEVATION 5390.736

STANDARD ACS BRASS DISC
SET IN THE CURB AND
STAMPED "8-K20(R), 1974 ACS",
AT SOUTH WEST CORNER OF
WYOMING BLVD AND CENTRAL
"S" INTERSECTION



RHOMBUS P.A., INC.
FACILITIES ENGINEERS • ENVIRONMENTAL CONSULTANTS

e-mail: rhombus@nmils.com
web site: www.RHOMBUSPA.COM

2620 San Mateo NE Suite B Albuquerque, NM 87110
TEL: (505) 884-6900 FAX (505) 881-6898

PROJECT TITLE: **MANUFACTURING/WAREHOUSING
BUILDINGS**

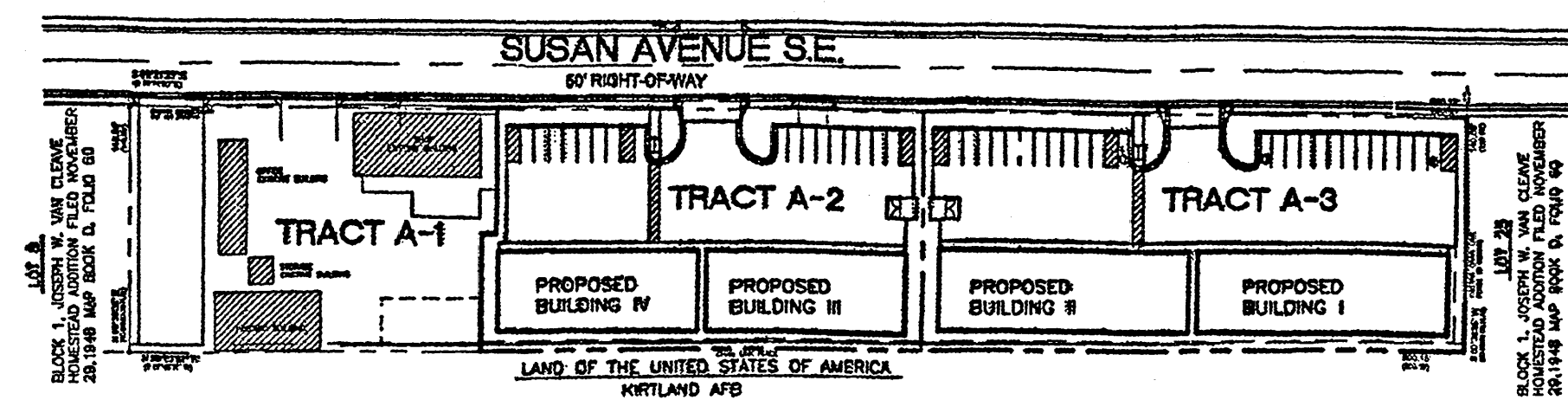
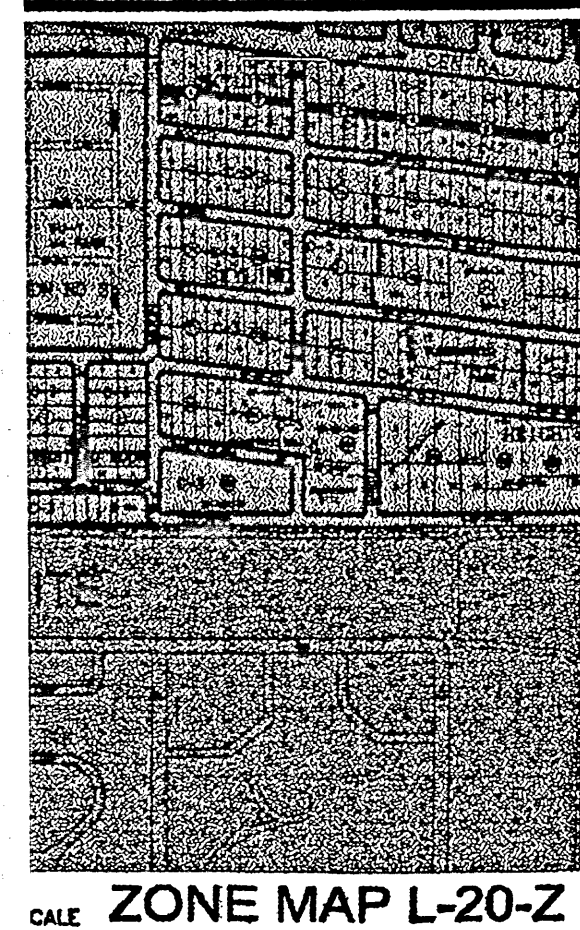
8800 SUSAN SE

SHEET TITLE:

GRADING AND DRAINAGE PLAN

APPROVAL	NAME	DATE
INSPECTOR		

CONCRETE CONTAINMENT WALL DETAIL



SITE LAYOUT DIAGRAM - TRACTS A-1, A-2 AND A-3.

1"=100'-0"

LEGEND

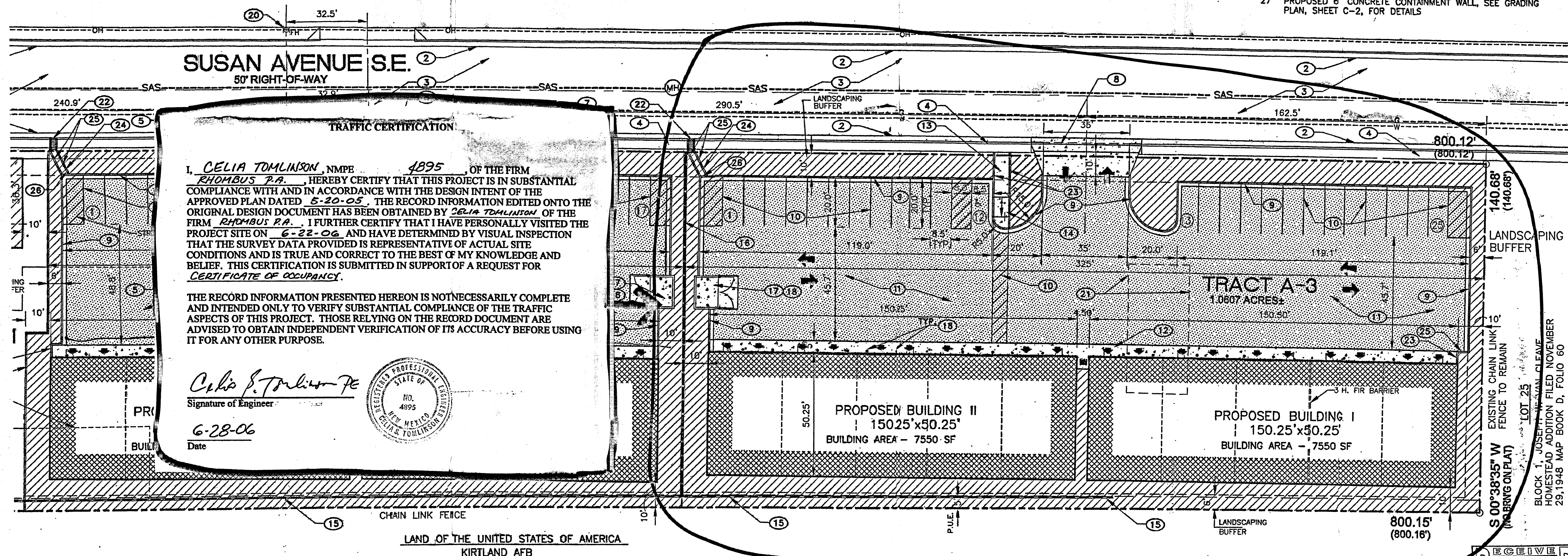
- NEW CONCRETE PAVEMENT
- LANDSCAPING AREA
- NEW ASPHALT PAVEMENT
- VEHICULAR TRAFFIC DIRECTION
- ENTRY DOOR
- PROPOSED BIKE RACK LOCATION
- EXISTING WATER LINE TO REMAIN
- EXISTING SEWER LINE TO REMAIN
- EXISTING SEWER MANHOLE
- EXISTING GAS LINE TO REMAIN
- EXISTING OVERHEAD POWER LINE TO REMAIN

OFF-STREET PARKINGS

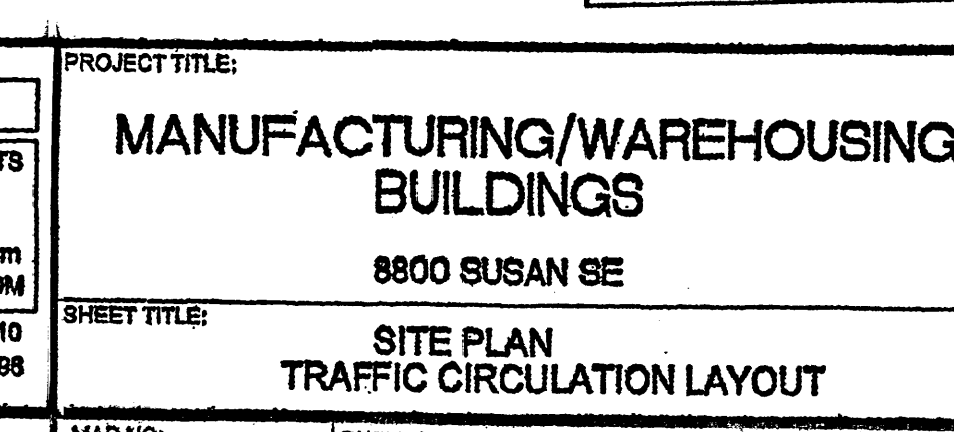
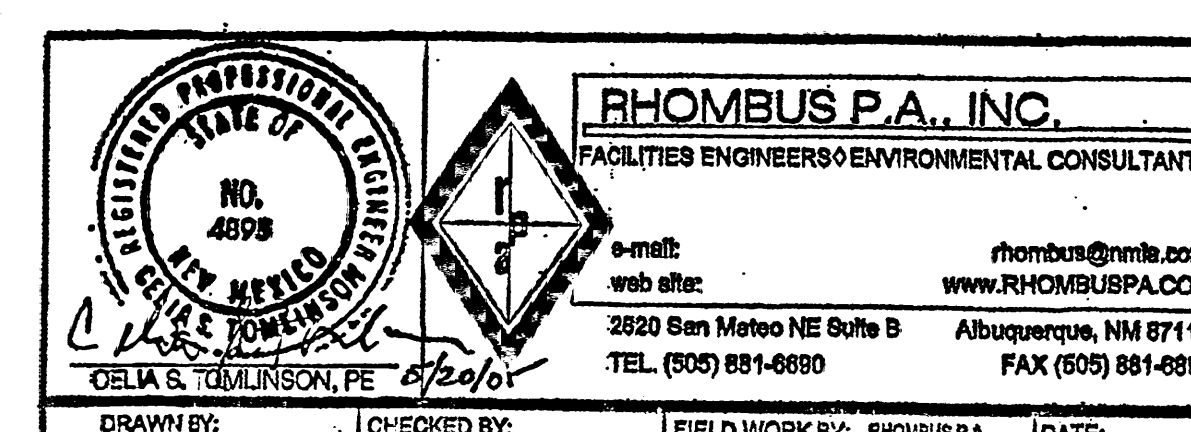
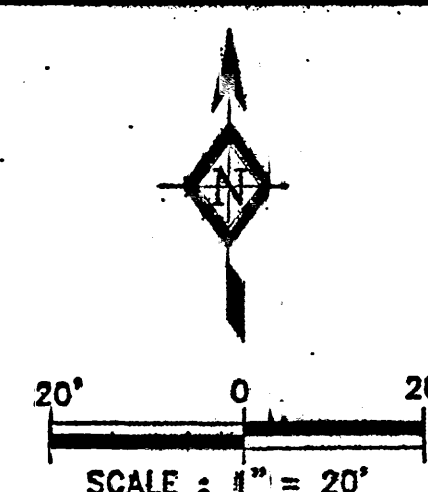
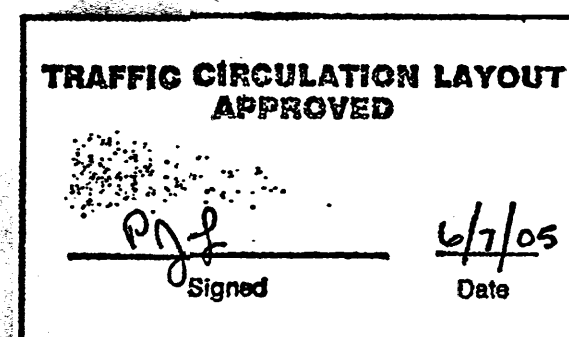
	TRACT A-2	TRACT A-3
PROPOSED BUILDINGS:	TWO MANUFACTURING 6,042 SF BUILDINGS = 12,084 SF	TWO MANUFACTURING 7,550 SF BUILDINGS = 15,100 SF
PARKING REQUIREMENT:		
1 P.S. PER 1000 SF OF NET LEASE AREA		
NUMBER OF SPACES PROVIDED:	13 PARKING SPACES	16 PARKING SPACES
NUMBER OF HC SPACES REQUIRED:	1, VAN ACCESSIBLE, P.S.	1, VAN ACCESSIBLE, P.S.
1 SPACE/1-25 REQUIRED P.S.		
NUMBER OF HC SPACES PROVIDED:	1, VAN ACCESSIBLE, P.S.	1, VAN ACCESSIBLE, P.S.
NUMBER OF BIKE SPACES REQUIRED:	2 P.S.	2 P.S.
NUMBER OF BIKE SPACES PROVIDED:	3 P.S.	3 P.S.
STANDARD SPACE DIMENSIONS:	8.5' x 20'	
HC ACCESSIBLE SPACE DIMENSIONS:	8.5' x 20' with 8' x 20' delineated aisle.	

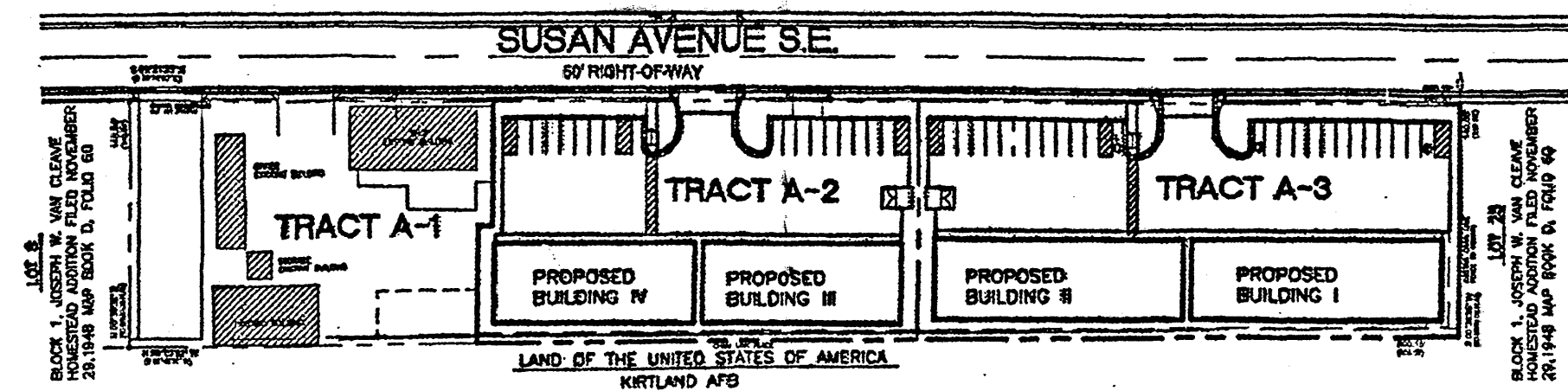
KEYED NOTES

- EXISTING BUILDING TO REMAIN
- EXISTING CONCRETE CURB & GUTTER TO REMAIN
- EXISTING ASPHALT PAVEMENT TO REMAIN
- EXISTING 3.6' WIDE CONCRETE SIDEWALK TO REMAIN
- PORTION OF EXISTING CONCRETE SLAB TO BE REMOVED
- PORTION OF EXISTING CONCRETE SLAB TO REMAIN
- EXISTING DRIVEPAD TO BE REMOVED. CONSTRUCT STANDARD CONCRETE CURB & GUTTER AND SIDEWALK PER COA STD DWGS #2415A AND 2430. ASSURE SMOOTH TRANSITION WITH EXISTING WORK. PATCH EXISTING ASPHALT PAVEMENT TO EXTENT REQUIRED PER COA STD DWG #2465.
- PROPOSED CONCRETE DRIVEPAD PER COA STD DWG #2425. MATCH EXISTING CONCRETE AND ASPHALT ELEVATIONS WHERE REQUIRED. ASSURE SMOOTH TRANSITION. PATCH EXISTING ASPHALT PAVEMENT AS REQUIRED PER COA STD DWG #2465
- PROPOSED CONCRETE MEDIAN CURB PER COA STD DWG #2415B. STRIPING ON ASPHALT PAVEMENT, TYPICAL
- PROPOSED ASPHALT PAVEMENT PER COA STD DWG #2405A
- PROPOSED 5' CONCRETE SIDEWALK PER COA STD DWG #2430; TOP OF CONCRETE @ OUTER EDGE EVEN WITH TOP OF ASPHALT
- PROPOSED 6' CONCRETE SIDEWALK PER COA STD DWG #2430
- CONCRETE UNIDIRECTIONAL HC RAMP PER COA STD DWG #2426
- EXISTING CMU BLOCK WALL TO REMAIN
- PROPOSED NEW CMU BLOCK RETAINING WALL. SEE GRADING PLAN
- PROPOSED TRASH BIN ENCLOSURE
- 6" O.D. STEEL PIPE, CONCRETE FILLED BOLLARDS, ENCASED IN 12" CONCRETE ALL AROUND AND EMBEDDED 2'-0". TYPICAL ALL OVERHEAD DOORS AND TRASH BIN ENCLOSURE
- PROPOSED FIRE HYDRANT
- EXISTING FIRE HYDRANT TO REMAIN
- EXISTING SHED TO BE DEMOLISHED
- PROPOSED 18" WIDE CONCRETE SIDEWALK GUTTER W/GRATE, (SEE GRADING PLAN), PER COA STD DWG #2236
- PROPOSED CONCRETE HEADER CURB PER COA STD DWG #2415B.
- PROPOSED 18" WIDE CONCRETE DRAINAGE GUTTER, SEE GRADING PLAN (SHEET C-2) FOR DETAILS
- PROPOSED 4' WIDE RUNDOWN CURB, SIM. TO COA STD DWG #241
- PROPOSED 2' WIDE RUNDOWN CURB, SIM. TO COA STD DWG #241
- PROPOSED 6" CONCRETE CONTAINMENT WALL, SEE GRADING PLAN, SHEET C-2, FOR DETAILS



TRACTS A-2 AND A-3





SITE LAYOUT DIAGRAM - TRACTS A-1, A-2 AND A-3.

LEGEND

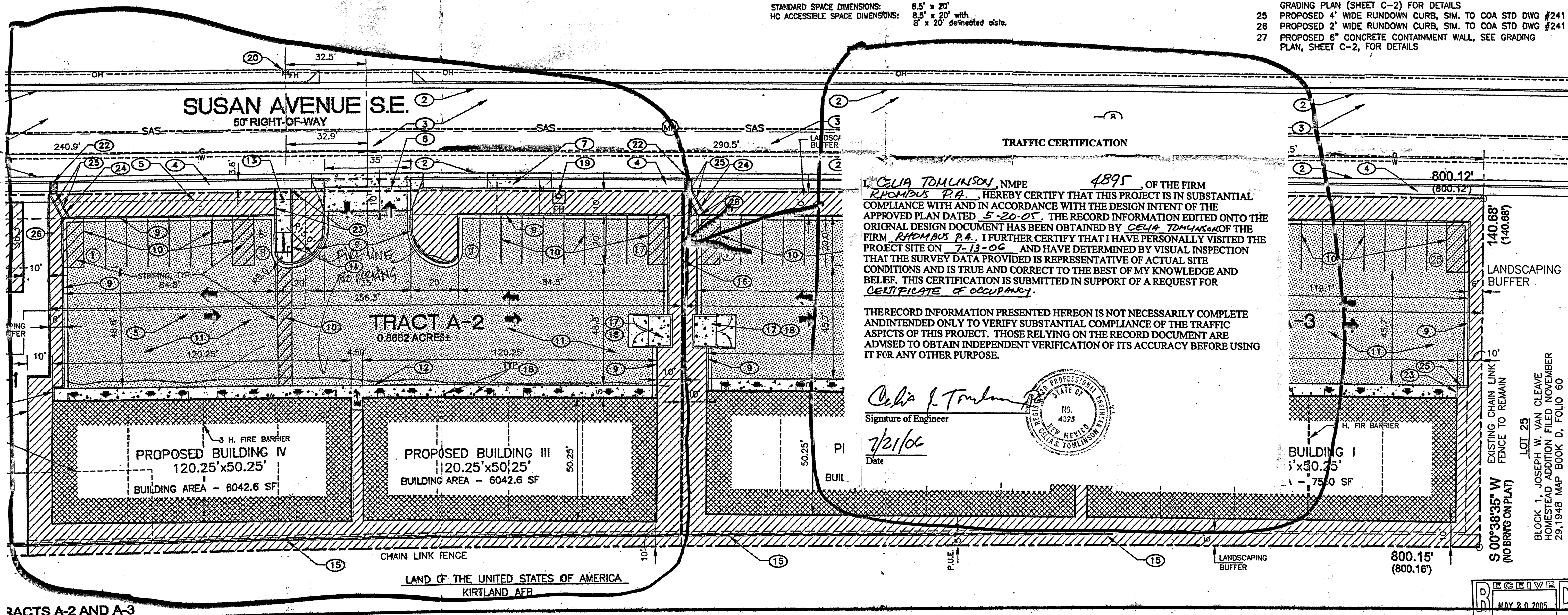
- NEW CONCRETE PAVEMENT
- LANDSCAPING AREA
- NEW ASPHALT PAVEMENT
- VEHICULAR TRAFFIC DIRECTION
- ENTRY DOOR
- PROPOSED BIKE RACK LOCATION
- EXISTING WATER LINE TO REMAIN
- EXISTING SEWER LINE TO REMAIN
- EXISTING SEWER MANHOLE
- EXISTING GAS LINE TO REMAIN
- EXISTING OVERHEAD POWER LINE TO REMAIN

OFF-STREET PARKINGS

	TRACT A-2	TRACT A-3
PROPOSED BUILDINGS:	TWO MANUFACTURING 6,042 SF BUILDINGS = 12,084 SF	TWO MANUFACTURING 7,550 SF BUILDINGS = 15,100 SF
PARKING REQUIREMENT:		
1 P.S. PER 1000 SF OF NET LEASE AREA	13 PARKING SPACES	16 PARKING SPACES
NUMBER OF SPACES PROVIDED:	17 PARKING SPACES	25 PARKING SPACES
NUMBER OF HC SPACES REQUIRED:	1, VAN ACCESSIBLE, P.S.	1, VAN ACCESSIBLE, P.S.
1 SPACE/1-25 REQUIRED P.S.		
NUMBER OF HC SPACES PROVIDED:	1, VAN ACCESSIBLE, P.S.	1, VAN ACCESSIBLE, P.S.
NUMBER OF BIKE SPACES REQUIRED:	2 P.S.	2 P.S.
NUMBER OF BIKE SPACES PROVIDED:	3 P.S.	3 P.S.
STANDARD SPACE DIMENSIONS:	8.5' x 20'	
HC ACCESSIBLE SPACE DIMENSIONS:	8.5' x 20' with 8' x 20' delineated aisle.	

KEYED NOTES

- EXISTING BUILDING TO REMAIN
- EXISTING CONCRETE CURB & GUTTER TO REMAIN
- EXISTING ASPHALT PAVEMENT TO REMAIN
- EXISTING 3.6' WIDE CONCRETE SIDEWALK TO REMAIN
- PORTION OF EXISTING CONCRETE SLAB TO BE REMOVED
- PORTION OF EXISTING CONCRETE SLAB TO REMAIN
- EXISTING DRIVEPAD TO BE REMOVED, CONSTRUCT STANDARD CONCRETE CURB & GUTTER AND SIDEWALK PER COA STD DWGS #2415A AND 2430. ASSURE SMOOTH TRANSITION WITH EXISTING WORK. PATCH EXISTING ASPHALT PAVEMENT TO EXTENT REQUIRED PER COA STD DWG #2465.
- PROPOSED CONCRETE DRIVEPAD PER COA STD DWG #2425. MATCH EXISTING CONCRETE AND ASPHALT ELEVATIONS WHERE REQUIRED, ASSURE SMOOTH TRANSITION. PATCH EXISTING ASPHALT PAVEMENT AS REQUIRED PER COA STD DWG #2465
- PROPOSED CONCRETE MEDIAN CURB PER COA STD DWG #2415B.
- STRIPING ON ASPHALT PAVEMENT, TYPICAL
- PROPOSED ASPHALT PAVEMENT PER COA STD DWG # 2405A
- PROPOSED 5' CONCRETE SIDEWALK PER COA STD DWG # 2430; TOP OF CONCRETE @ OUTER EDGE EVEN WITH TOP OF ASPHALT
- PROPOSED 6' CONCRETE SIDEWALK PER COA STD DWG # 2430
- CONCRETE UNIDIRECTIONAL HC RAMP PER COA STD DWG # 2426
- EXISTING CMU BLOCK WALL TO REMAIN
- PROPOSED NEW CMU BLOCK RETAINING WALL, SEE GRADING PLAN
- PROPOSED TRASH BIN ENCLOSURE
- 6" O.D. STEEL PIPE, CONCRETE FILLED BOLLARDS, ENCASED IN 12" CONCRETE ALL AROUND AND EMBEDDED 2'-0". TYPICAL ALL OVERHEAD DOORS AND TRASH BIN ENCLOSURE
- PROPOSED FIRE HYDRANT
- EXISTING FIRE HYDRANT TO REMAIN
- EXISTING SHED TO BE DEMOLISHED
- PROPOSED 18" WIDE CONCRETE SIDEWALK GUTTER W/GRATE, (SEE GRADING PLAN), PER COA STD DWG #2236
- PROPOSED CONCRETE HEADER CURB PER COA STD DWG #2415B.
- PROPOSED 18" WIDE CONCRETE DRAINAGE GUTTER, SEE GRADING PLAN (SHEET C-2) FOR DETAILS
- PROPOSED 4' WIDE RUNDOWN CURB, SIM. TO COA STD DWG #241
- PROPOSED 2' WIDE RUNDOWN CURB, SIM. TO COA STD DWG #241
- PROPOSED 6" CONCRETE CONTAINMENT WALL, SEE GRADING PLAN, SHEET C-2, FOR DETAILS



TRACTS A-2 AND A-3

